



JINHAI TANG

Chief physician, PhD supervisor, and former president of The First Affiliated Hospital of Nanjing Medical University (Jiangsu Provincial People’s Hospital).



Prof. Tang is an expert with special government allowance from the State Council, a standing committee member of the Chinese Anti-Cancer Association and Vice President of the Jiangsu Medical Association. As an advocate and pioneer of standardized diagnosis and treatment of breast cancer in China, Prof. Tang led the development of guidelines on breast cancer diagnosis and treatment and has authored several handbooks in this field, including *Comprehensive Treatment of Breast Cancer*. He has led more than ten research projects at national and provincial level and made outstanding contributions to clinical and basic research of breast cancer. To date, he has published 225 papers indexed by SCI, with a total citation count of 6814 and an h-index of 46.

Q: Please tell us about your achievements in the translational research on breast and liver cancer.

We systematically studied the role of microvesicles, and elucidated new mechanisms of microvesicles in the occurrence, development, metastasis and drug resistance of breast cancer. In liver cancer, our team identified microvesicles of tumor-associated macrophages (TAMs) as an important factor in tumor invasiveness. The results were published in *Hepatology*. I led the team to create innovative nanocarriers and nanoprobe for the diagnosis and treatment of breast cancer, providing new ideas and methods for precision treatment of breast cancer. We developed and applied a series of groundbreaking optical/photoacoustic/MRI multimodal nanoprobe in imaging to guide precision surgery, chemotherapy and gene therapy for breast cancer.

Q: What are your contributions to the comprehensive diagnosis and treatment of breast cancer in China?

I made significant contributions to the clinical pathway of breast cancer, especially in breast-conserving surgery for the central quadrant of the breast. Through hard work and perseverance, we built and implemented a screening model for secondary prevention of breast cancer, which helped to improve the early diagnosis rate of breast cancer in China. We compiled the *Diagnosis and*

*Treatment of Breast Cancer Standard, Manual for Standardized Comprehensive Diagnosis and Treatment of Breast Cancer and Comprehensive Treatment of Breast Cancer*. Additionally, we co-authored the 2011, 2013, 2015, 2017 and 2019 editions of *The Guidelines and Standards for Diagnosis and Treatment of Breast Cancer of the Chinese Anti-Cancer Association*. These guidelines have greatly facilitated the standardization of clinical practice of breast cancer.

In 2013, I pioneered a surgical innovation, leading to a higher success rate for breast conservation of the central quadrant of the breast. The technique, promoted throughout China, benefited patients greatly.

We are the first to explore the application of digital health technologies to breast cancer to raise the standard of precision treatment. This has significant implications for redressing the imbalanced distribution of medical resources in China and for improving the clinical outcome of major diseases in the border regions and sparsely populated areas in central and western China.

Q: What training programs did you set up for young physicians in your hospital?

To train the next generation of young physicians with an international vision, Jiangsu Provincial People’s Hospital and Brigham and Women’s Hospital, a

world-class academic medical center that is a founding member of Mass General Brigham, jointly launched the “International Residency Program.” Clinical experts from the Brigham participated in the program and gave lectures to the young physicians remotely. The program is the first-of-its-kind in China with an attractive curriculum and is well respected by residents. The program has broadened trainees’ visions, developed professionalism and comprehensive clinical skills at the beginning of their careers, and provided clear guidance to their career development. More importantly, it trained residents to follow international guidelines in their clinical practice. In addition, the trainees can also practice medical English, laying a solid foundation for their careers and for international exchanges. In a continued effort to cultivate the new generation of young clinicians and science and technology innovators with a global vision, there are discussions to further strengthen the International Residency Program, including the potential for a mentoring program to further focus the training and nurture a team of world-class young scientists.

Q: What has the Jiangsu Provincial People’s Hospital achieved in smart healthcare under your leadership when you were the president of the hospital?

In short, we have made big achievements

in three areas in smart healthcare, the future of clinical practice. They are, more scientific and efficient management, a facilitator for research, and a remote consultation system conducive to telemedicine and the fight against the Covid-19 pandemic. As the top-ranked hospital in Jiangsu, the hospital passed the 5-level national evaluation of the electronic health record system and the grade B of the 5-level evaluation of interconnectivity in 2019, and the 3-level national evaluation of smart service in 2021. It established a smart integrated clinical system. The artificial intelligence, 5G, big data, the internet and other new technologies are applied to assist in diagnosis and treatment of diseases, facilitating the development of smart healthcare and improving the healthcare quality.

Looking ahead, we will play an

exemplary and leading role in Jiangsu in creating a smart healthcare ecosystem for patients. Our goal is to build a fully intelligent, all-sensing and integrated management system. The hospital obtained an internet hospital license in October 2019. Currently, we offer online consultation in 20 departments. Services including offering clinical advice on treatment are now fully available. The internet hospital covers such functions as video and text consultation, prescription, issuing of medical advice, and drug delivery. Thanks to remote consultation via the internet, the hospital has improved the consultation efficiency with top clinical experts in Jiangsu, raised the success rate of critical care and addressed the uneven distribution of medical resources. Remote consultation played a key role during the Covid-19 pandemic when

it was difficult for doctors to meet in person due to pandemic control measures. In addition, the hospital in Nanjing, with branches in Suqian, Liyang, and Shengze, took the lead in providing remote specialist clinical services in the province. Patients from other places can make an appointment with the specialists in the main branch, the hospital in Nanjing, who will then guide doctors in other branches to diagnose and treat patients in real time via video call and texting.

Contact Information

Address: 300 Guangzhou Road, Gulou District, Nanjing, Jiangsu  
Phone: 86-25-83718836  
Email: jsph@jsph.org.cn  
Website: http://www.jsph.org.cn

Jiangsu Provincial People’s Hospital

The history of Jiangsu Provincial People’s Hospital can be traced back to 1936 when it was established as a clinic affiliated with Jiangsu Provincial College of Health Policy and Management (now Nanjing Medical University). Today, the hospital is a comprehensive tertiary care facility in Jiangsu and includes the Jiangsu Woman and Children Health Hospital as its branch.

As an emergency treatment center for major outbreaks of infectious diseases and a member of the national emergency medical team, the hospital plays a crucial role in the healthcare system. It also takes on national projects aimed at improving the diagnosis and treatment of rare and severe diseases, while also serving as a teaching hospital for Nanjing Medical University. The hospital is home to the Jiangsu Institute of Clinical Medicine Education and serves as a national demonstration base for standardized residence training.

With a vision of innovative, coordinated, green, open, and shared development, the hospital is committed to serving the people and giving back to society. Patient interests are always put first, with professionalism and compassion guiding the hospital’s approach. The hospital strives to become a top-class medical center and research hospital, dedicated to advancing healthcare and improving the lives of its patients.