James Chih-Hsin Yang – Director, Department of Oncology, National Taiwan University Hospital

We are on the right track in terms of collaborating with the industry, and we even have more trials than patients!

21.06.2019

Tags: Taiwan, Oncology, NTUH, Hospital, KOL

Dr James Chih-Hsin Yang, director of National Taiwan University Hospital's department of oncology, speaks about oncology in Taiwan and the role that the NTU network plays in the island's oncology space. Dr Yang goes on to share his insights on key trends shaping modern and future cancer treatment.

The National Taiwan University Cancer Center was inaugurated in December 2018 and opened its door to patients earlier this year. What does this addition to NTU's network mean for Taiwan's ability to fight against cancer?

This cancer center will increase the capacity of patients we can treat. We currently treat 10,000 new patients a year and the new center holds abought 500 beds additionally. There are increasing needs for cancer care as incidence around the world rises and more treatments become available. As technology advances, we have to refer patients in a more multidisciplinary fashion. In the past, one doctor treated one cancer patient, but today four or five may treat a single patient to provide them the best care. Therefore, more resources need to be put into this area. The cancer center is already established and current we are working to gradually open more beds to get the center fully up and running.

What further steps have you taken to attract clinical trials from the leading oncology MNCs to NTUH?

We are on the right track in terms of collaborating with the industry, and we even have more trials than patients! More and more new drugs are coming from MNC pharma and biotechs, not only in the conventional regions like the US and Europe, but exciting innovation is also coming from Japan, South Korea, and of course Taiwan's own domestic market. Therefore, NTUH has ample opportunity to evaluate the drugs which are available and find the best trials to bring to our patients.

The government has taken steps to facilitate the movement of talent from academia to the industry while also reducing taxes to incentivize applied biotech research. Do feel that these initiatives have made any changes in the situation?

The private sector and investors have been very active in launching new products and both the research-based players and middle position companies supplying support and services are flourishing. However, we do need more professionals to enter into this area, especially in smaller biotech companies to breach their products from the lab to the market.

There are multiple steps in commercialization which require expertise that many smaller companies do not have. Typically, biotechs will carry their product up to the early stages of clinical trials then spin off their product to larger organizations once they reach phase III trials. However, I do believe that this trend is changing as more professional expertise is being poured into the biotech industry.

How Is the government supporting the flow of talent from the academic space to the industry sector?

In Taiwan, there is legislation to allow scientists working in the public sector to work together with the private industry to exchange and translate IPs. However, this still has not been as successful in the western world and there is still room for improvements. There are still some uncertainties about what happens when transferring IP to the private sector which must be clarified in order to build trust between the two sectors.

Additionally, the regulatory framework to encourage the initiation of research trials has been improving, but other countries are still ahead of Taiwan. Even if Taiwan is taking steps to create a

better trial environment, if regional competitors are doing this more quickly or creating more progressive regulations, we will still be left behind.

What is NTU doing internally to translate its research outside of the laboratory?

In early phase drug development, we have no problem in keeping up with that is happening in other institutions outside of Taiwan. Early phase is a very narrow area to work in, with only the top few institutions being recognized, so the department is heavily investing in this activity. We are focused on cultivating talent in this area and many colleagues in NTU have been recognized by the global pharmaceutical community as KOLs in their field including breast cancer, head and neck, haematology, and lung cancer especially.

In cancer treatment, NTU is aiming to create an advanced environment to be the first choice for complex clinical trials. We are not working to expand the market, but rather bringing innovative drugs which have new treatment mechanisms to society. NTUH's mission is to work with the industry to help develop breakthrough treatments and open up more space in science. This is why the new NTUCC is very important in increasing the capacity of our cancer network.

How involved is Taiwan in the conversation of next-generation cancer treatments?

Last year Taiwan amended its "Regulations Governing the Application of Specific Medical Examination Techniques and Medical Devices" to permit six types of cell therapy for blood cancers, strokes, and degenerative joints. Among the cell therapies permitted under the amendment is T-cell immunotherapy for blood malignancies and solid tumours that do not respond to other treatments.

However, I am still concerned about the maturity of the science behind this technology as it can be difficult to recommend patients to pay for the treatment for developing technologies that have not confirmed the benefit yet. We are focused on therapies that have a strong scientific background so that when they are given to patients, we have strong confidence that they will work. With novel cell therapies. We still do not have the capability to precisely predict the outcome of the study.

What strengths can Taiwan leverage as an R&D ecosystem?

Taiwan cannot do everything, so we do have strong expertise in several areas such as clinical sciences, epidemiology. We do have many domestic cancers which are different from western types of cancer. Taiwan has a high prevalence of novel EGFR mutations in lung cancers, which has allowed us to put emphasis on the research in this direction and solve the regional problems by ourselves.

Additionally, our consolidated health system is a strong advantage of Taiwan. Our infrastructure is well connected and in countries like the US where patients must travel very far for novelty treatments, this is not the case in Taiwan – our capabilities are very well distributed. Moreover, all of our medical records are in English which is a big benefit for the international pharma community.

Do you believe it can be a regional leader of oncology innovation?

We have the expertise, capabilities and top-notch clinicians to help oncology science forward. What we definitely need now is continuing to provide and catch up the global standard of care in cancer treatment, especially the delayed reimbursement of effective anticancer agents from our National Insurance Bureau. We also need integration of facilities, grants and expertise to work together in focus areas. In addition, it is also important to break the barrier and create a free flow of experts, budgets and projects between academia, industry and regulators.

What are your priorities to further establish NTUH as a regional leader in cancer treatment and research?

Volume is a big issue, so as I mentioned we are growing our capacity as displayed by the NTUCC. NTUH is also investing heavily into the immunotherapy area through basic research for cancer immunology. We invite world-renowned scholars to come to NTUH and work from scratch together. Immunotherapy has been ignored in medical oncology for a long time, so now we must go back and fill this knowledge gap. In oncology, we have a special mindset to take more risks and try more innovative methods because patients are fighting for their lives.

What is the most important trend you see in today’s oncology area?

In immunotherapy, is successful in its first step in roughly 15 percent of patients. However, many patients still fail after their first success at the end of the day. Therefore, we are focused on two

questions – why 85 percent of patients do not respond to the treatment and what else can we do for these patients. There are so many methods just waiting to be tested, but we have to be smarter about how we do this. The slow trial model will not work in this era, so we must design new trial models and redefine endpoints to determine the efficacy of treatments. It is also important to combine Taiwan’ special computational specialties either in hardware or software to invest more time and fund in medical sciences.

See more interviews