

Prof. Bo Lu: patients come first—the direction of lung cancer treatment

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Editor's note

On June 27, Prof. Bo Lu from Thomas Jefferson University was invited to Shanghai Ruijin Hospital to deliver a speech. In the speech, Prof. Lu introduced current lung cancer treatments, including chemotherapy, radiotherapy, immunotherapy and so forth. Furthermore, he compared advantages and shortcomings of these therapies as well as sharing his opinions on the development of lung cancer treatments. We were honored to have a face-to-face talk with Prof. Bo Lu after the speech. He strengthened that patients should be the first consideration when treating lung cancer.

Expert's introduction

Bo Lu, Professor of Radiotherapy at Thomas Jefferson University Hospital. He's also the Chairman of the Lung Cancer Working Committee of the National Cancer Institute (NCI) and the Chairman of the Lung Cancer Transformation Research Committee of the American Radiation Oncology Collaborative Group (RTOG) (*Figure 1*).

Prof. Lu focuses on radiation-induced cell death in lung patients, among other basic science areas. His clinical interests include the integration of novel targeted agents in the treatment of lung cancer, radiosurgery for lung cancer, and reduction of toxicities from thoracic radiation. More recently, he has looked at cancer stem cells for enhancing radiotherapy in a setting of lung cancer.

Interview

JTD: *The topic of your lecture today is Current Landscape of Lung Cancer Treatment. Would you please tell us your take-home message? What remains to be the main challenges/difficulties in lung cancer treatment?*

Prof. Lu: I came up with this topic because I want to share my enthusiasm about utilizing immunotherapy as a way to treat lung cancer potentially providing a cure for patients with metastatic disease. This is also a passion shared by many physicians who have been taking care of lung cancer patients.

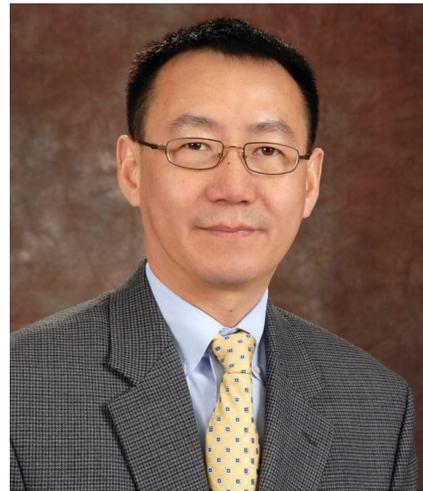


Figure 1 Prof. Bo Lu.

When it comes to the challenges, the age of patients is a big problem. Many lung cancer patients are elderly patients, who may be in their 70's, 80's or even 90's. These patients usually have multiple organ disease, such as really bad COPD (chronic obstructive pulmonary disease), bad lung function, many comorbidities, hypertension, cardiovascular disease, diabetes and so forth. Therapies are common poorly tolerated by these elderly patients. So we need to make lung cancer treatments more effective and better tolerated, which means less side effects. In this case, I think immunotherapy really fit that category.

JTD: *How do you see the correlation between different departments in terms of lung cancer treatment?*

Prof. Lu: In my opinions, it means how can physicians in different specialties work together to take care of patients with lung cancer, thinking on patients' behalf. I think the best way would be—we all come together to talk about a case, to discuss our recommendation, and to discuss evidence-based data available for lung cancer treatment, and then come up with a list of options for treating that particular patient of lung cancer. After that, we go to see

that patient together, and give that patient all these options. As we know, patients think differently when they select therapies. Some lung cancer patients may choose the most aggressive or effective therapy available, so they would have the least possibility of cancer recurrence. For some elderly patients, we should take into account their age, their medical issues or comorbidities, their tolerance to therapies. Therefore, we have to explain details of potential side effects of treatments, educate and help them make decision to figure out the most suitable therapy.

JTD: *Your research team has made significant contribution in illuminating the mechanism of therapeutic resistance of lung cancer. How can it benefit patients in clinical application?*

Prof. Lu: Novel therapies and effective treatments, all of these ideas come from the research understanding the basic biology of lung cancer, testing the potential novel therapy that would be more effective to control lung cancer. What we are talking about today, such as immunotherapy and EGFR mutated lung cancer, all come from years of research in the laboratory. Therefore, if you want to have more effective therapies to enable patients to live longer and maintain life quality, you have to start with lab study.

JTD: *In recent years, “personalized medicine” is becoming more and more popular. Based on your research experience, how would you comment on the trend of “personalized medicine” and where do you see it is leading in the future?*

Prof. Lu: I think “personalized medicine” is a general term. People can understand it at different levels. The keyword is “personalized”. Every patient is different. Every cancer is different. Therapies are different. So, to understand patients’ needs, you have to listen to patients. You need to know their medical history, give them the safest but also effective therapy, and understand the biology through research. In a word, understanding the pathology, the patients and their comorbidities, all of these are components of personalized medicine.

JTD: *Based on your cooperation with Shanghai Ruijin Hospital, what would be your expectation and comments on the cooperation between east and west in the fight against lung cancer?*

Prof. Lu: I think there are a number of unique features in China. We have many patients with lung cancer, a lot of

which are EGFR mutated lung cancer. That’s a difference in terms of etiology and genic subsets from lung cancer patients I treated in US. So the volume of patients and the availability of bio specimen provide a huge asset that we can probably validate some of the research findings among the unique lung cancer patients in China. Hopefully, by understanding better the particular features of lung cancer in China, we may come up with more suitable and effective therapies for Chinese lung cancer patients.

JTD: *With all your successful roles both in research and society committees, what would be your advice to balance one’s time? What is the driving force for your inspiration and enthusiasm?*

Prof. Lu: I, myself, am in the category of physician scientist or clinician scientist. We are hybrid that can work easily between research laboratory and patients care, with understanding of both worlds. The challenge is that the time what god gives us is fair. How can you do two jobs at the same amount of time? It adds more pressure especially for younger physician scientists in both China and US. How do we do better to encourage more physicians becoming scientists? It really happens at the levels of institutions, maybe the government agencies, and also departments. You have to have some sort of incentives for physicians who have curious mind. There are some physicians not only satisfied with current therapies to treat lung cancer. They may want to do more researches for better treatments. Therefore, the institutions or the dean of medical schools really need to set up policies to allow these physicians certain amount of time to pursue their academic interests. They need support along the way.

JTD: *Thank you for your wonderful sharing!*

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None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

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