Professor Robert Pirker: primary prevention and early detection of lung cancer should be strengthened

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Robert Pirker is currently Professor of Medicine and Program Director for Lung Cancer at the Department of Medicine I, Medical University of Vienna, Austria. He obtained a master's degree in Biochemistry in 1978 and his medical degree in 1979 from the University of Vienna. Robert Pirker trained in Internal Medicine, Hemato-Oncology and Nuclear Medicine at the University of Vienna. He also worked as NIH Visiting Fellow at the Laboratory of Molecular Biology (Chief: Dr. Ira Pastan), National Cancer Institute, Bethesda, MD, USA [1983-1986].

He specializes in Hemato-Oncology. His research focuses on drug resistance mechanisms in patients with cancer, chemotherapy and targeted therapy of lung cancer, predictive factors in lung cancer, and anaemia management in patients with cancer. As a member of the IALT-Bio and LACE-Bio groups, he has been involved in the characterization of predictive factors with regard to adjuvant chemotherapy in patients with completely resected non-small cell Lung Cancer (NSCLC). He was also the world-wide Co-ordinating Investigator of the First-Line ErbituX in lung cancer (FLEX) trial.

Robert Pirker has published more than 150 articles, reviews or book chapters. He is an Editorial Board Member of Lung Cancer, and has been an European Society for Medical Oncology (ESMO) Faculty Member on Chest Tumors and a member including chair of the International Association for the Study of Lung Cancer (IASLC) Education Committee. He was Congress President of the 8th Central European Lung Cancer Congress in 2002 and Chair of the Scientific Committee of the European Multidisciplinary Conference on Thoracic Oncology in 2009. He was the Congress President of the 14th Central European Lung Cancer Congress in 2014 and will be the Congress President of the 17th World Congress on Lung Cancer in 2016 in Vienna, Austria. He is also Chair of the Steering Committee of the recently launched Central European Initiative against Lung Cancer. Robert Pirker has received several scientific awards and has been a member of ESMO, ASCO and other scientific societies for many years.



Figure 1 Professor Robert Pirker is addressing the audience at the opening ceremony of the 14^{th} Central European Lung Cancer Congress.

The 14th Central-European Lung Cancer Congress was successfully held in Vienna in December 2014. Would you like to know how the Congress President, Prof. Pirker (*Figure 1*) looks retrospectively at the congress? How does he look at the future management of lung cancer? What are the fruits harvested after the exchange between the doctors from China and those from the Central European countries? You will get these all answered from the interview as follows.

TLCR: As you are the president of the 14th Central European Lung Cancer Congress, what do you think of the congress when you look back at it?

Prof. Pirker: The Central European Lung Cancer Congress is a very important congress because this is the congress in the area of the world that has high incidence rates of lung cancer. Countries like Hungary, Czech Republic, Poland, are among those countries which have the highest incidence rates of lung cancer. Therefore, it is important to have the meeting regularly and it has already been the 14th congress since 1992. When planning this conference, we wanted to focus on new developments in treatment, particularly with regard to the targeted treatments, but also on biological approaches.

We focused also on the accurate diagnosis including molecular pathology. We had a session, for example, on molecular biology for clinicians. Other important areas were early detection by low-dose CT screening and the role of prevention. In this regard, we decided to also have a combined symposium with doctors from China and Central Europe. In this Chinese-Central European Symposium, we discussed specifics of lung cancer in China versus those in our area. We also discussed smoking cessation strategies ongoing in China. These strategies are very interesting for us because we also have to strengthen our efforts to decrease the smoking prevalence in Central Europe. Early detection combined with smoking cessation strategies was one of the hot issues of the congress. It is very important that we enhance cooperation between Chinese doctors and doctors from Central Europe with regard to both prevention and screening by low-dose CT. Cooperation with China would be very helpful for us in Central Europe. China has the same huge problem of smoker-related cancers like we have in Central Europe. If we can work together, we will be much stronger. Together with China, we should aim at decreasing the world-wide smoking epidemic.

TLCR: As you say, we need to enhance the cooperation between doctors of different areas. Is there any plan for the cooperation?

Prof. Pirker: We had a combined section called Chinese-Central European Symposium in which we exchanged information on the epidemiology of lung cancer and on on-going clinical trials. We also discussed potential cooperations. I think that the Symposium stimulated future cooperation which will benefit both of us.

TLCR: What questions were fiercely discussed in the congress?

Prof. Pirker: One of the most hotly discussed sections was a section on EGFR-TKI, in particular on afatinib. We discussed the importance of survival and the improvement of survival in patients with exon-19 deletions. And then there was also discussion about the differences between patients with exon-19 deletions and those with exon-21 mutations. And the question was, whether there could be differences between the various EGFR-TKIs. We also recognized the need for improvement with regard to EGFR mutation testing. For example, some speakers mentioned that not all patients with adenocarcinomas got tested. This is certainly an important issue and we need more data on this because

actually we don't know whether we test all patients with adenocarcinomas. We screened for example more than 1,700 patients in the implementation of personalized medicine in NSCLC in central Europe: EGFR testing, histopathology, and clinical features (INSIGHT) project and detected an epidermal growth factor receptor (EGFR) mutation rate of 13.8% in patients of Central Europe which is lower than the mutation rate seen in Chinese patients. I believe that EGFR mutation analysis has been established in the major cancer centers of Central Europe. However, we need more data on smaller centers and also nation-wide data.

TLCR: Some experts think the big hope for the future management of lung cancer is biology-driven treatment and immunotherapy. What are your opinions regarding the management of lung cancer in the future?

Prof. Pirker: It is no doubt that we have established molecular-based treatments and we have EGF receptor tyrosine kinase inhibitors and anaplastic lymphoma kinase (ALK) inhibitors in clinical practice. We also have positive trials with EGFR monoclonal antibodies. These antibodies may enter clinic practice in the coming years. And we have many immune checkpoint inhibitors in clinical trials. These inhibitors are very promising, but we have to wait for the results of phase III trials. Nevertheless, anti PD-1 or anti-PDL-1 antibodies will probably enter clinical practice within the next five years. Despite all of these advances, however, I am convinced that we have to strengthen the primary prevention and also try to implement screening in order to detect the lung cancer earlier. So, I think we have to change smoking habits in Central European countries, in China and globally. Working together, we will finally decrease the world-wide epidemic of smoking. Lung cancer management requires broad approaches. We have to prevent whenever possible. We have to detect lung cancer earlier than we currently do. We have to provide accurate diagnosis with CT, PET-CT and the new molecular tests. And we have to provide adequate care including palliative care for all patients with lung cancer.

TLCR: Some Chinese doctors reflect that in China the disease has already developed into advanced stage usually when a patient is detected with lung cancer. Therefore, it is really a problem about how to early detect lung cancer.

Prof. Pirker: That is what I wanted to learn from the Chinese doctors in the Chinese-Central European

Symposium. What is actually ongoing in China: What is the epidemiology of lung cancer in China? What are the stages of the disease at the time of initial diagnosis? What are the treatments and their differences between the smoking-related and the non-smoker related cancers? The aim of the symposium was to learn from each other. Lung cancer is a global disease, but there are regional differences. We have to learn about the global nature of lung cancer and the regional differences.

TLCR: Are there going to be some more effective actions in Central Europe for early detection and prevention of lung cancer?

Prof. Pirker: One of the focuses of this conference was the role of screening based on the American lung screening trial which has shown that lung cancer screening by low-dose CT decreases lung cancer mortality and overall mortality. There is some discussion on whether lung cancer screening should be implemented. I suggest that we should get involved in the field of early detection in combination with smoking cessation programs. The final goal of course will be the routine implementation of screening. At the moment, screening should be restricted to major cancer centers in our area. We plan to cooperate with other centers and would be greatly interested in cooperation with Chinese cancer centers. Therefore, one of the focuses of this conference was early detection in combination with primary prevention.

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TLCR: It is our bonor and pleasure to cooperate with you organizing the special issue indicated to the congress on the platform of TLCR (Vol 3, No 5). What do you think of this special issue?

Prof. Pirker: First of all, thank you, Melanie and Grace, for this great and nice cooperation. When we first discussed, I was very much pleased that we decided to publish this special issue on translational lung cancer research dedicated to the Central European Lung Cancer Congress. I think it is a very nice issue with several interesting review articles and also the abstracts. In particular, the issue has a modern format, is well printed in very nice colors, and is very easy to read. It is really a nice preparation. Thank you once again. I will keep this in my library because this is an issue of *Translational Lung Cancer Research* which I had the great honor to edit together with Professor Zhou from Shanghai. And I greatly appreciate the help of both of you and all of your team. I am looking forward to cooperating with you, Prof. Zhou and Chinese lung cancer experts in the near future.

TLCR: Thank you very much for all your support!

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