Prof. Nico van Zandwijk: all forms of asbestos are carcinogenic and safe use of asbestos is an illusion

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Editor's note

Asbestos is a naturally-occurring mineral and has been mined and used for multiple purposes by many industries worldwide (1). Exposure to asbestos fibres can cause life-threatening illnesses, so use of asbestos has been greatly reduced and it is now banned in 61 countries, including Australia (1). This time, we are honored to interview Prof. Nico van Zandwijk, who has been actively involved in the research on asbestos-related cancers and directed the Asbestos Diseases Research Institute (ADRI), University of Sydney, Concord, NSW, Australia from 2008 till 2017.

Expert's introduction

Nico van Zandwijk, MD, PhD, FRACP, FCCP, Emeritus Professor.

Professor van Zandwijk (*Figure 1*) obtained his medical degree from the University of Amsterdam, Netherlands in 1973, and subsequently received licenses in internal medicine and pulmonary medicine in 1979 and 1981, respectively. In 1976, he completed his PhD. In 1981, he was assistant professor at the Academic Medical Centre, and consultant physician at the Netherlands Cancer Institute (NKI) in Amsterdam. From 1985 to 2008, he served as head of the Department of Thoracic Oncology at the NKI.

Professor van Zandwijk has been affiliated with many scientific and professional bodies; serving as secretary, from 1982 to 1988, and later as chair, from 1988 to 1994, of the European Organization for Research and Treatment of Cancer Lung Cancer Group. He has been chair of the Scientific Board (Clinical Oncology) of the NKI, and was chairman of the State Committee on Asbestos and Lung Cancer of the National Health Council, in 2002. Professor van Zandwijk was a member of the Board of Directors of the International Association for the Study of Lung Cancer from 2005–2009. He was also on the advisory board of the

Figure 1 Prof. Nico van Zandwijk.

Thoracic Oncology Section of the French National Cancer Institute and he was the co-chair of the World Conference on Lung Cancer 2011 in Amsterdam. After directing ADRI from 2008 till 2017 Professor van Zandwijk received the Emeritus status and is currently involved in the preparation trials testing novel immunotherapy approaches.

He has authored and co-authored over 300 peer-reviewed international scientific papers and book chapter and coordinated several multinational studies.

Interview

ATM: Before coming to Australia, you spent about 27 years at the Netherlands Cancer Institute (NKI). Could you share with us your experience there?

Prof. van Zandwijk: It was a privilege to establish the department of thoracic oncology in this important cancer

research institute and to be mentored by Professor Piet Borst, NKI director and eminent researcher.

ATM: When did you start working at ADRI and what attracted you?

Prof. van Zandwijk: I started in March 2008 and was head hunted by Sydney University. The attraction and at the same time a considerable challenge was to set up a new translational research institute, starting from scratch.

ATM: Did you have a typical working day as the Director of ADRI?

Prof. van Zandwijk: These were long days (usually from 8 am till 7 pm). I also used weekends to get research (and grants) off the ground.

ATM: How do epidemiologic studies work in research into asbestos-related cancers?

Prof. van Zandwijk: Epidemiologic studies constitute a most important basis for oncological research and formed an important part of my multidisciplinary research approach into asbestos-related cancers at ADRI. A very important research tool was the Australian Mesothelioma Registry, collecting exposure data from all patients diagnosed with mesothelioma in Australia. Dr. Soeberg, epidemiologist at ADRI used this data and drafted a series of papers describing the mesothelioma epidemic in Australia.

ATM: Can you share with us some multinational studies on thoracic oncology that you coordinated? What were the challenges?

Prof. van Zandwijk: I have been active in the European Organization for the Research and Treatment of Cancer (EORTC) for more than 20 years including chairmanship of the Lung Cancer Cooperative Group. During that period, I have coordinated several international studies. The largest study was EUROSCAN, a chemoprevention study in Lung and Head & Neck Cancer patients. Together with Professor Ugo Pastorino and Otilia Dalesio, the former head of the Biometrics Dept. of the Netherland Cancer Institute and her staff, we managed to complete this important prevention study. Major challenges were to make sure that patients received the appropriate medication (there were four treatment arms in the study) and the synchronization of data management all over Europe. I was fortunate to be involved early studies with tyrosine kinase inhibitors concentrating on predictive factors and major combined modality studies.

ATM: Are there any research projects underway that you would like to share with us? What can we expect?

Prof. van Zandwijk: I am currently involved in the preparation of a study in patients with malignant mesothelioma using a novel immunotherapy approach in cooperation with Professor John Rasko, Head of the department of cell and molecular therapy at Royal Prince Alfred Hospital in Sydney. I would not be surprised if immunotherapy would be able to provide better outcomes than those achieved by chemotherapy.

ATM: How would you comment on the chemical safety/ environmental epidemiology in Australia?

Prof. van Zandwijk: The lessons learnt from the asbestos tragedy in Australia are most important and continue to set the stage for protective measures. As far as air quality is concerned I very much hope that all countries will have heard the alarming calls from environmentalists and health researchers, warning us for the immense consequences of air pollution.

ATM: In terms of asbestos-related diseases, what will be the key messages that you would like to share with medical professionals in developing countries?

Prof. van Zandwijk: All forms of asbestos are carcinogenic (WHO consensus) and safe use of asbestos is an illusion. The latency period between first exposure to asbestos and occurrence of disease is long and obscures the causal relationship between asbestos exposure and asbestos-cancers. Moreover, the mesothelioma diagnosis is very difficult resulting in a significant underestimation of the number of asbestos cancers.

ATM: In order to raise Asbestos Awareness, are there any programs organized to educate the public and/or the people who work in certain occupations?

Prof. van Zandwijk: Asbestos awareness is extremely important. Please note that workers in developing countries continue to be exposed to toxic asbestos. Asbestos awareness is taken seriously in several developed countries (ASEA =

Asbestos Safety and Eradication Agency is the governmental organization in Australia) but at the same time there is an alarming lack of awareness in countries that are still developing. Grass root/union organizations are active in raising awareness in developing countries. Sadly, asbestos producers and certain organizations (Environmental Protection Agency in US) fail to act according the abundant scientific evidence on the hazards of asbestos exposure and contribute to a continuing lack of adequate preventive measures.

ATM: What methods can be taken to maintain the quality of life in patients with mesothelioma?

Prof. van Zandwijk: The life expectancy of patients with mesothelioma is short and without active treatment quality of life, will (usually) quickly deteriorate. Early referral to palliative care remains an important advice.

ATM: In what ways can we support the carers and families of the patients diagnosed with lung cancer?

Prof. van Zandwijk: The burden of the lung cancer diagnosis is heavy for family members and carers. It is important for doctors to include them in the (palliative) treatment plans and to provide direct assistance in terminal stages of disease.

ATM: What else could we know about the cancer diagnosis and treatment in Australia?

Prof. van Zandwijk: The Australian government stimulates research into cancers with poor prognosis, including Lung Cancer. Understandably, life style changes, smoking cessation and prevention of asbestos exposures are considered important. Moreover, optimal diagnostic and treatment pathways are stimulated. Cancer Australia, State Cancer Organizations (NSW Cancer Institute) and the Cancer Council play important roles together the health districts (responsible for hospitals). An excellent example of facilitation of research is found in Sydney, where Sydney Local Health District is supporting the research infrastructure.

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ATM: Based on your own experience in writing a Response Letter (http://tlcr.amegroups.com/article/view/18846/14940) in Translational Lung Cancer Research (TLCR), how do you think of the Editorial Review project of AME journals. Do you have any suggestions?

Prof. van Zandwijk: It is an excellent initiative to provide a forum to further discuss outcomes of important research studies by established experts. I was pleasantly surprised by the efficiency of the AME staff involved in the Editorial Review Project.

ATM: What would you like to do if you are not a doctor?

Prof. van Zandwijk: I have always wanted to be a painter and admire the work of so many talented figural painters today.

ATM: What would be your advice to the young medical professionals in Australia?

Prof. van Zandwijk: If you aim to work on a better future and you have research talent please start a career in translational research.

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Footnote

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

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