Laudatio auf Professor Lars-Erik Holm für die Verleihung der Hanns-Langendorff-Medaille 2010

Chr. Reiners

Lars-Erik Holm was born in 1951 in Sweden. His actual position is to be Director General of the National Board of Health and Welfare as well as to be Chief Medical Officer of Sweden. He started his academic career after his Doctor in Medicine (MD) in 1997 and his PhD in Oncology in 1980. Afterwards, he became Associate Professor of Oncology at Karolinska Institute Stockholm.

In the past, Prof. Holm has been Director General of the Swedish Radiation Protection Authority, Member of the Commission on Safety Standards of the International Atomic Energy Agency, representative of the Swedish Delegation to UNSCEAR and Vice Chairman and Chairman of this Committee, Member of the International Commission on Radiological Protection as well as Vice Chairman and Chairman of the Commission. In addition, he has been member of the Swedish Nuclear Power Inspectorate, Member of the Board of the Institute for Environmental Medicine at Karolinska Institute, Deputy member of the Board of Nordic School of Public Health, Director of the National Institute of Public Health and Head of the Department of Cancer Prevention at Karolinska Hospital Stockholm.

Prof. Holm is a worldwide well-known epidemiologist with a strong research focus on radiation carcinogenesis. His strengths are studies on large cohorts of patients exposed to radiation for different conditions.

Prof. Holm's research focus number 1 is the development of thyroid cancer and other malignancies after exposure to radioiodine. Already in 1997, he addressed in his MD thesis the at least theoretically possible induction of thyroid cancer and other malignancies after diagnostic exposure to I-131. In this context, Lars-Erik Holm followed a very large cohort of more than 30.000 patients exposed. His first publications on this issue appeared in two papers published in the Journal of the National Cancer Institute in 1980. Later-on, this cohort was followed and additional publications appeared in the years 1988, 1989 and 2003. Together with a group from Germany, he addressed the issue of radiation induced thyroid cancer in children exposed to diagnostic activities on radioiodine in 2001.

Since significant increases of the risk of thyroid cancer and other malignancies after diagnostic exposure to radioiodine could not be revealed, Lars-Erik Holm studied a second cohort of more than 10.000 patients exposed to therapeutic activities of radioiodine because of thyrotoxicosis and multinodular toxic goiter. He addressed this issue in his PhD thesis, which appeared in 1980. In the same year, a very frequently cited paper was published in the New England Journal

of Medicine and in the following years, publication appeared in the Journal of the National Cancer Institute in 1991 and in the Lancet in 1992.

Already in 1984, Dr. Lars-Erik Holm attended a meeting of the “Vereinigung Deutscher Strahlenschutzärzte” in Hamburg. This meeting has been organized by Dr. Leppin, whom we all remember very well. His presentation with the title “Thyroid Cancer after Exposure to Radioiodine” appeared in Vol. 25 of the book series ”Strahlenschutz in Forschung und Praxis”.

Dr. Holm’s results, showing that there was no increased risk of thyroid cancer and other malignancies after diagnostic or therapeutic exposure to radioiodine in adults, was the basis of a more widespread medical use of radioiodine e.g. in Germany in the following years. In addition, his findings supported a more objective discussion about the thyroid cancer “epidemy” after Chernobyl. Until today, it seems to be clear, that only children – and among the very young ones – are really prone to develop thyroid cancer after exposure to the different radioisotopes of iodine.

These findings are really important for my partners in Belarus and the Ukraine and me when we try to give a prognosis on the development of thyroid cancer incidence in the two countries most heavily affected by the Chernobyl accident.

There is a second study which brought Prof. Holm worldwide acknowledgment. He could carry out this study on a large cohort of more than 18.000 patients treated as children with radiotherapy because of skin hemangioma at Radiumhemmet Stockholm between 1909 and 1959. The outcome was, that a dose related increase of secondary cancers to the thyroid, the breast, the bone and the soft-tissue had to be observed.

In later years, Prof. Holm extended his interests to non-radiation related issues e.g. the risk of pesticides in agricultural workers. He studied the influence of Dioxin as a carcinogen for soft tissue sarcomas, malignant lymphomas and testicular cancer.

During his time as Head of the Department of Cancer Prevention at Karolinska Hospital Stockholm, he worked on the influence of nutrition (e.g. cholesterol, ß-lipoproteins) on the development of colorectal, stomach and breast cancer. Finally, I shouldn’t forget to address Dr. Holm’s merits as a fighter in the anti-smoking campaign of the Stockholm Cancer Prevention Program.

It wouldn’t be difficult, to find at least 5-10 additional interesting research subjects, which were published in more than 300 scientific papers written by Lars-Erik Holm and his group. However, I am convinced, that everybody now is sure, that Lars-Erik Holm is a really excellent candidate for the Hanns-Langendorff-Medal 2010.