Letter to the Editor

Response to “Thyroid cancer after Chernobyl: mechanisms of overestimation” by Sergei V. Jargin

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1. The studies commented by S.Jargin (2009) and our work (Fuzik et al., 2011) were performed by absolutely different teams. Only one name coincides on the lists of authors, but Prof. Alina M. Romanenko (whose studies were commented by S.Jargin, 2009) and Prof. Anatoly Yu. Romanenko, a co-author of our study, are different researchers with very different scientific interests. This could be easily seen from the topics of their publications.

2. Reference to the so called “Chernobyl victim syndrome” is inappropriate here because in our work thyroid cancer incidence was considered not for separate affected groups (recovery operation workers, evacuees etc.), but for the total population of different Ukrainian regions with “high” and “low” average thyroid doses; therefore individual thyroid cancer cases were not assigned “radiogenic” or sporadic. Yet in our opinion, radiation factor made a significant contribution to the difference between thyroid cancer incidence rates in respective territories, especially in children.

3. Difference between thyroid cancer incidence in “high” and “low exposure” territories cannot be explained only by uneven geographical distribution of health care resources. For instance, according to the data of Ministry of Health of Ukraine, the average annual frequency of ultrasound examinations in Zhytomir region was 2.9 times higher in 1992-1996 and 1.3 times higher in 2002-2006 than that in Kiev region. However, thyroid cancer incidence rate in Kiev region exceeded that in Zhytomir region 1.5 and 1.6 times during the same time periods, respectively.

4. S. Jargin states: “*there are medical institutions in Kiev servicing the whole country; and it is very probable that some patients, brought to the capital from other regions, were for certain reasons registered as locals or as Chernobyl victims*”. Scientific community may be unaware that registration of cancer cases in Ukraine is performed according to patients’ current place of residence (passport data) regardless where they were diagnosed and treated.

5. S. Jargin wrote: “*It partly explains, why in the high-exposure regions, thyroid cancer incidence rates were significantly higher (in some age groups) among people born in 1982-1986 (i.e. before the accident) compared to those born in 1987-1991 (Fuzik et al. 2011): at a later date after the accident, diagnostic quality was improved and cancerophobia subsided,*

eliminating prerequisites for over-diagnosis ... ; and there were no motives to enhance the incidence figures in persons born after the accident". It should be stressed out that our work reports the results of a long-term follow up of subcohorts born in 1982-1986 and 1987-1991, and thyroid cancer incidence rates were significantly higher in the first one during the whole period of observation including later years, when even "cancerophobia subsided", according to S.Jargin.

6. We realize and acknowledged that "*our investigation was not free from ecological biases and limitations*" (Fuzik et al. 2011), however "*the international scientific community recognized the increase in thyroid cancer morbidity among those exposed as children to the fallout from the Chernobyl accident as an objective fact*" (Ivanov, 2009), and our work confirms this. To prove an alternative point of view, such ecological biases, some elements of which may involve issues raised by S.Jargin, need to be measured and whether they affect our results should be evaluated, to be used as evidence-based arguments.

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