

IMPORTANCE OF CONTROL OF RADON AND SMOKING EXPOSURE IN LUNG CANCER PREVENTION IN THE REPUBLIC OF MOLDOVA

Liuba CORETCHI¹, Ala OVERCENCO¹, Aurelia ABABII¹, Valeriu BILBA²

¹National Agency for Public Health, Republic of Moldova

²Institute of Oncology, Republic of Moldova

Corresponding author: Ala Overcenco, e-mail: ala.overcenco@ansp.gov.md

Keywords: lung cancer, smoking, radon, prevention.

Introduction. Lung cancer is the second leading cause of death from malignant tumors in the Republic of Moldova and, according to the index of deaths due to lung cancer, our country ranks the 56th place in the world. The most important risk factor for the development of lung cancer is tobacco smoking, which accounts for between 80% and 90% of all the cases, and the gas radon is among the other most important risk factors and is the leading cause of lung cancer among non-smokers. Applying preventive measures for these risk factors will help reduce the burden of lung cancer morbidity on the health system and society as a whole. **Aim.** The purpose of the research was to evaluate the situation regarding lung cancer morbidity in the Republic of Moldova and to develop some preventive measures. **Material and methods.** Data of lung cancer morbidity (incidence/prevalence) in the Republic of Moldova in 2012-2020 (from the Health Data Management Direction of National Agency for Public Health) were used. The descriptive-statistical analysis of the lung cancer morbidity in the Republic of Moldova was carried out on the data stored and processed in MS Excel. **Results.** In 2020 lung cancer was the second most common cancer in the Republic of Moldova and more than 726 people were diagnosed with this disease this year, which represents 8.5% of all newly diagnosed cancers among men and women combined. Estimation of the situation of lung cancer morbidity in last years revealed highest value of the lung cancer incidence in Donduseni (50.1 per 100 thou in 2018) as well as the highest prevalence of lung cancer was registered in Criuleni (142.8 per 100 thou in 2017). In turn, the minimum values of lung cancer incidence and prevalence were registered in Cantemir (8.0 per 100 thou in 2012) and Calarasi (9.1 per 100 thou in 2017), respectively. In the last 3 years, there has been a decrease in lung cancer incidence at the national level, and the 9-year linear trend shows an insignificant decrease (by 0.1 per 100 thou/year). In turn, the lung cancer prevalence shows a small increase – the tendency is 0.3 per 100 thou/year. It is worth noting that the maximum values of lung cancer prevalence were also recorded in many northern regions of the country. The descriptive-statistical analysis of the incidence and prevalence of lung cancer in the Republic of Moldova during the last 9 years by the standard error has shown relatively small changes in relation to the average value in regions. In turn, the standard deviation for the lung cancer incidence has indicated the average variability of data ($\sigma > 2$), and the standard deviation of the prevalence was large ($\sigma > 19$). For the lung cancer incidence, the coefficient of variation was approximately 17% having the smallest variation in the north of the country, and for the lung cancer prevalence it was about 40%. Thus, a consistently high incidence of lung cancer remains in the north of the country, and the prevalence is heterogeneous across the country and tends to increase. **Conclusions.** The results of the estimation of cancer morbidity continue to be a concern for health authorities in the country and justify the intensification of efforts towards prevention. Reducing the burden of lung cancer in the country must be based on certain key aspects of prevention – the fight against smoking and the control of radon levels in buildings through testing and remediation.