

COVID-19 AND LUNG CANCER DIAGNOSTIC DELAYS IN NORTHERN SERBIA

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Background: The influence of COVID-19 on lung cancer (LC) diagnostic delays has been reported worldwide, but our country has limited data. The Institute for Pulmonary Diseases of Vojvodina (IPBV) is the tertiary healthcare institution specializing in diagnosing and treatment of pulmonary diseases in Vojvodina Province. Since 2009 data from all diagnosed LC patients have been entered into the IPBV's LC registry (LCR).

Methods and Objectives: To determine the COVID-19 impact we retrospectively analyzed five years period (2018- 2022) using the hospital LCR data (age, gender, LC type, stage of the disease, ECOG PS and smoking habits).

Results: During the observed period a total of 6,083 LCs were diagnosed. The number of LC patients in 2020 (1057) was significantly lower compared to the previous ten-year average (2010-2019) (1211), and the 2018-2019 average (1303).

Male to female ratio (64.4% vs. 35.6%, $p=0.243$), smoking status (61.8% of active smokers, 27.9% of ex-smokers and 10.3% of non-smokers, $p=0.086$), and ECOG PS ($p=0.069$) showed no significant changes during five years.

A significant increase in the average pack-years (36.77 ± 13.359 , $p=0.04$) and in the average age of LC patients (65.61 ± 8.25 , $p<0.001$) in 2022 compared to previous years was observed.

In the five years distribution of LC by I, II, IIa, IIb, and IV stages were 7.8%, 7.9%, 15.6%, 22.3%, and 44.6%, respectively. Stage IV was more often registered in 2021 than in all other years (48.6% vs. 44.6%, $p=0.012$).

Conclusion: The year of the beginning of COVID-19 was followed by a decrease in the number of LC cases in 2020. A delay in LC detection in 2020 could influence of higher percentage of stage IV LC in 2021.

An increase in LC detection in stage IV, and in pack-years are alarms for further comprehensive preventive activity for early LC detection and decreasing smoking prevalence.

Keywords: COVID-19, lung cancer, diagnostics