

STAGES AND TYPES OF LUNG CANCERS IN THE PILOT LUNG CANCER SCREENING PROGRAM IN VOJODINA, SERBIA

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Background: Lung cancer (LC) screening with LDCT reduces LC mortality by 20% due to detection in the early stage of the disease. The aim was to analyze LC stages, histological types, and demographic characteristics of LC patients in the pilot LC screening program in Vojvodina from October 2020 to July 2024.

Objectives and Methods: Persons aged 50-74 years, with a smoking history of 30 pack-years or more or 20 pack-years with additional risks (COPD, prior pneumonia, other malignancy, LC hereditary history) underwent LDCT evaluation. Radiological assessment and further evaluation were done per Lung RADS score.

Results: During the observed period, a total of 9,006 LDCT scans were performed on 5,483 screening participants. The majority were females (58.2%).

Prevalence of Lung RADS scores 0, 1, 2, 3, 4A, 4B and 4X were respectively 1.0%, 41.0%, 40.5%, 7.8%, 6.5%, 1.1% and 2.0%.

The total number of patients with malignancy was 108, and the LC detection rate was 1.8%. From a total number of LC, 54.4% were detected among males. The average age of LC patients was 66 years (65.79 ± 8.97), with no observed differences by gender ($p=0.218$).

Percentage of LC by stage I, II, IIIA, IIIB and IV were respectively 48.5%, 12.6%, 8.7%, 10.7%, and 19.4%. From 2021 to 2024 percentage of LC stage I by years was 31.8%, 48.0%, 54.5% and 58.3%, respectively.

Among LC types, 86.3% were NSCLC (adenocarcinoma 52.4%, squamous cell carcinoma 25.2%, NOS 8.7%), 9.7% were SCLC, and 3.9% other types.

Conclusion: Lung RADS score positive results were found in 9.6% of screening participants. 61.7% of LCs detected in screening were in the I and II stages.

Keywords: lung cancer, screening, Lung RADS score, stage I