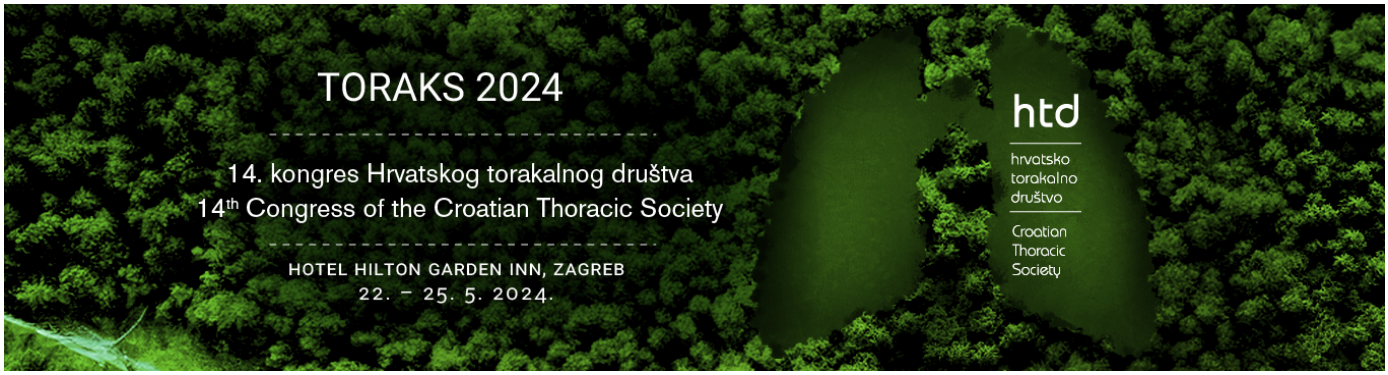

LUNG CANCER SCREENING AND INCIDENTAL RENAL CANCER IN SMOKERS

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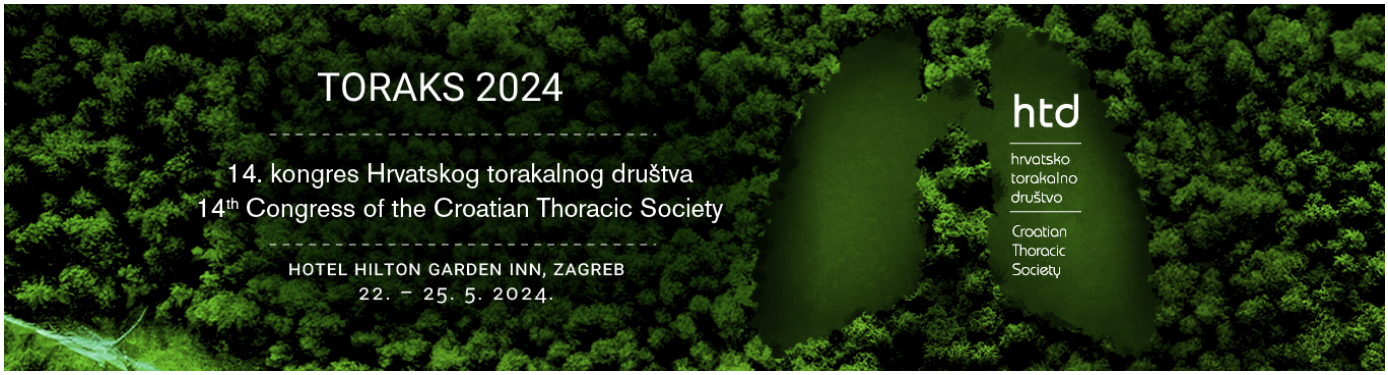
Background:

Smoking is a well-established risk factor for the development of lung cancer. In Croatia, efforts to detect this disease at earlier stages among high-risk populations have led to the implementation of lung cancer screening initiatives, utilizing low-dose computed tomography (CT) scans to improve treatment outcomes. However, smoking not only increases the risk of lung cancer but also elevates the likelihood of other malignancies, such as renal cell carcinoma, due to the carcinogens and toxins present in tobacco smoke. The absence of routine renal cell carcinoma screening programs poses a challenge in detecting this malignancy early when treatment options are most effective.

Conclusion:

Cigarette smoking serves as a significant risk factor for both lung cancer and renal cell carcinoma



(RCC), emphasizing the importance of thorough screening. Low-dose computed tomography (CT) screening, pivotal for early lung cancer detection, also offers an opportunity for incidental RCC discovery, particularly among smokers. Integrating renal cancer surveillance into lung cancer screening protocols could enhance detection and intervention for both diseases, thus reducing their burden.

Case:

In this report, we present a compelling case of renal cell carcinoma incidentally detected in a 58-year-old male participant of a lung cancer screening program, characterized by a history of long-term cigarette smoking (45 pack/years). His screening low-dose CT revealed a nodular lesion in the right upper lobe of the lung, measuring 34 mm in diameter with a volume of 6825 mm3, exhibiting solid consistency, and accompanied by severe emphysema, prompting referral to our clinic. Spirometry and diffusing capacity of CO were within normal limits. Endoscopic examination findings, specifically using RpEBUS, were unremarkable. A high-resolution CT scan of the thorax and abdomen was then performed and unveiled a mucocele in the upper right lung lobe, likely arising from a congenital malformation of the right tracheobronchial tree. Additionally, abdominal imaging identified an oval, hyperdense lesion at the upper pole of the right kidney, measuring 40x37x38 mm, exhibiting heterogeneous enhancement predominantly suggestive of a non-renal parenchymal lesion in the arterial phase. Notably, no significant adenopathy was observed. The patient underwent laparoscopic radical nephrectomy. The final histopathological diagnosis confirmed renal adenocarcinoma, G2, pT1bN0, characterized histologically by clear cell renal cell carcinoma with alveolar, solid, and cystic growth patterns.