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An invisible group of COVID-19 victims; impact on Dutch lung cancer care

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Dear editor,

Clinical outcomes of lung cancer patients with COVID-19 have been investigated extensively [1]. Recently, a study of the effects of COVID-19 showed severe delays in detection, diagnosis, and treatment in British lung cancer patients [2]. To investigate the effects of the SARS-COV-2 pandemic on regular lung cancer care in the Netherlands, we studied every patient with lung cancer registered in the Dutch Lung Cancer Audit (DLCA), which includes detailed information on patient, tumor, and treatment characteristics and follow up [3].

We observed a major decline in the number of non-small cell lung cancer (NSCLC) and small-cell lung cancer (SCLC) patients diagnosed during the first wave of the COVID-19 pandemic (16-03-2020 until 24-05-2020) compared to the same period in previous years (2018 and 2019). During the first wave, 1746 patients were diagnosed with NSCLC compared to an average of 2641 patients in 2018 and 2019. The most severe decline in lung cancer diagnoses was 50%, with only 146 weekly diagnoses with NSCLC vs. 296 weekly diagnoses with NSCLC in the control period. Between the first and second wave, the number of patients diagnosed recovered to the expected numbers observed in 2018 and 2019. However, during the second wave (21-09-2020 until 27-12-2020), we observed another 25% decline of newly diagnosed lung cancer patients. With such a major decrease, we expect a significant increase in the proportion of newly diagnosed lung cancer patients with a high stage of disease in the first months of 2021 compared to the control period.

Compared to the control period, NSCLC patients diagnosed during the first wave of the pandemic presented with significantly worse Eastern Cooperative Oncology Group Performance Score (ECOG PS) ≥ 2 (26% vs. 20%, p -value < 0.001), and more patients presented with metastatic disease compared to the control period in 2018 and 2019 (49% vs. 43%, p -value < 0.001). No significant differences were found in gender and age. We observed comparable results for the 2nd wave regarding ECOG PS and increase of metastatic disease. The latter seems to result from a small shift of stage III to stage IV disease. A probable cause of this stage shift might be patient delay during both COVID waves if symptoms were neglected or hospital visits avoided for fear of contamination.

Time between the first hospital visit and date of diagnosis is also

registered in the DLCA and showed shorter intervals during the first wave, second wave, and the period in-between, indicating timely care for patients at least after presentation. We hypothesize that due to the lower numbers of diagnosed patients and awareness of urgency for this patient group, time between the first visit and diagnosis was short.

In the coming years, outcomes such as the overall survival of patients diagnosed in 2020 will be compared to previous years. At present, the follow-up time of these patients, especially those diagnosed during the second wave in 2020, is still limited. We fear that the impact of the COVID pandemic on lung cancer care will remain visible in upcoming years and that delayed lung cancer diagnosis may lead to a different victim group of COVID-19.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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