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The Management of Patients With Lung Cancer During the Outbreak of Coronavirus Disease 2019



To the Editor:

We thank Russano et al.¹ for their thoughtful comments on our report. To date, accumulating evidence suggests that patients with cancer are at higher risks of severe acute respiratory syndrome coronavirus 2 infections and more likely to have higher mortality than the general population.^{2,3} Lung cancer is one of the most common malignancies worldwide, the clinical manifestations and signs of which overlap with novel coronavirus disease 2019 (COVID-19). Therefore, the management of patients with lung cancer during the COVID-19 outbreak is raising concerns. We previously reported a case of a patient with *EGFR T790M* mutant lung cancer who continued osimertinib therapy despite the development of COVID-19,⁴ indicating the feasibility and safety of maintaining targeted treatment in patients with good condition. Russano et al.¹ pointed out that patients harboring driver mutations just represent a minority of cases. Nevertheless, in contrast to the white population, patients with driver mutations account for approximately 50% to 60% of the east Asian population with nonsquamous NSCLC.⁵ In addition, some noncytotoxic drugs, such as antiangiogenesis agents, are also indicated for wild-type lung cancer. Therefore, our experience still benefits a considerable number of patients with lung cancer during the COVID-19 outbreak.

Admittedly, we are facing complicated scenarios in clinical practice as stated by Russano et al.¹ Potential interactions between coronavirus and anticancer therapies may exist. Chemotherapy and radiotherapy are

immunosuppressive and favor infectious complications, and immunotherapy might lead to immune-related events, the mechanisms of which overlap with lung injury in COVID-19. Therefore, it is reasonable to temporarily interrupt the abovementioned treatments pending recovery from COVID-19. On the basis of our single-institute data,³ six patients with lung cancer without *EGFR* mutations were interrupted in anticancer treatment pending recovery from COVID-19. As of February 23, 2020, two had died from COVID-19. The other four discharged patients did not report cancer-related symptoms. The median hospitalization duration of the six patients with lung cancer for COVID-19 was 13 days, which indicated that the interruption of anticancer treatment was short.

In addition, owing to concerns about potential severe acute respiratory syndrome coronavirus 2 infection, patients with cancer were suggested to reduce hospital visits during the epidemic episodes. The delay or interruption of anticancer treatment in patients without COVID-19 was controversial. We further investigated the impact based on our single-institute data.³ Of the 288 hospitalized patients with lung cancer, 276 patients without COVID-19 have ongoing anticancer treatment. A total of 197 patients experienced treatment interruption, in which 50 might develop progression (Table 1). Compared with the patients continuing targeted therapy, a considerable proportion of cases were suspected to have progression owing to the delay of radiotherapy (10.7%) or periodic chemotherapy and immunotherapy (26.0%). Therefore, we suggested that life-saving chemotherapy and radiotherapy with curative intent should be reserved and prioritized under strict quarantine measures.

Collectively, there is no easy, universal solution to oncologic care during this outbreak. Clinicians can make decisions on the basis of several variables, including the extent of the epidemic, capacity of local health care institutions, stage of cancer, intent of the treatment, and patients' comorbidities and age. In these trying times, it is important to weigh comprehensively and individually these variables rather than to rely on a routine.

Drs. Ouyang and Hu contributed equally to this work.

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Table 1. Outcomes of Patients With Lung Cancer Without SARS-CoV-2 Infection Treated at the Zhongnan Hospital of Wuhan University

	RT n = 28, n (%)	CT and Immunotherapy n = 206, n (%)	TKI n = 42, n (%)	Total n = 276, n (%)
Treatment on schedule	0	14 (6.8)	42 (100.0)	56 (20.3)
Switching from intravenous CT to an oral therapy	0	23 (11.2)	0	23 (8.3)
Treatment interruption	28 (100.0)	169 (82.0)	0	197 (71.4)
Reports of suspicious symptoms associated with progression	3/28 (10.7)	44/169 (26.0)	NA	50/197 (25.4)

CT, chemotherapy; NA, not applicable; RT, radiotherapy; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2; TKI, tyrosine kinase inhibitor.

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Lessons Already Learnt From the Coronavirus Disease 2019 Pandemic



To the Editor:

The first patient with coronavirus disease 2019 (COVID-19) in Spain was registered on January 31, 2020. Since then, the escalating growth of the disease has affected more than 150,000 patients, has caused over 15,000 deaths, and a similar number of health professionals have been infected. As of April 10, 2020, Spain has the highest number of patients in Europe and the third highest number of deaths in the world.¹

The thoracic surgery service of our 400-bed hospital serves a population of 1.2 million, and performs about 120

lung resections for lung cancer and over 90 surgical explorations of the mediastinum per year. In early March, the commission in charge of the hospital organization during the pandemic restricted the outpatient clinic to the day hospital for oncohematologic treatments, and also restricted surgical activities to priority oncologic operations. However, with the exponential increase of patients with COVID-19, the outpatient clinics and the postsurgical recovery rooms have had to be transformed into hospital wards and intensive care units, respectively, and the respirators in the operating rooms have had to be used for patients with COVID-19. The result is that no surgical procedure, except for emergency cases, can be performed, and no new patients can be accommodated in the outpatient clinics.

Our hospital is like a casualty hospital; all wards are filled with patients with COVID-19. Nearly 300 health professionals have been infected, and more are in quarantine for having been in close contact with infected patients or colleagues. Those who can still work are devoted exclusively to patients with COVID-19. Some patients have been externalized in a nearby hotel because there was no room in the hospital. Pulmonologists, thoracic surgeons, and oncologists, who usually meet in tumor boards, are now working as part of improvised medical teams attending infected patients. There is only one thoracic

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