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1765P Developing a risk assessment score for cancer patients during the COVID-19 pandemic

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Background: Data on the novel coronavirus (CoV) respiratory disease (COVID-19) in cancer patients (pts) are limited. In some individuals, CoV infection triggers an aberrant inflammatory response, leading to lung tissue damage. Cancer pts treated with immunotherapy (IT) may therefore be more at risk for COVID-19 infection and related complications.

Methods: We performed a thorough review of the literature on CoV pathogenesis and cancer, selecting shared features of the two disease entities to develop a risk-assessment score to quantify both the risk of infection and the risk implied in cancer treatment delays.

Results: The score includes clinical and laboratory variables (Table). Pts' characteristics include: age, presence of comorbidities (hypertension, cardiovascular disease, diabetes, chronic obstructive pulmonary disease, chronic systemic infections), obesity, sex, Eastern Cooperative Oncology Group (ECOG) performance status (PS), and concomitant steroid treatment (>10 mg daily of prednisone equivalent, lasting for >1-month period). Disease characteristics include: lung cancer diagnosis, history of thoracic radiotherapy (RT) (only for pts with extra-thoracic tumours). Treatment characteristics include: line of treatment, type (IT or combined IT/chemotherapy [CT] considered high-risk, followed by CT, and other anticancer drugs), history of immune-related adverse events (irAEs). Laboratory tests include: levels of neutrophil-to-lymphocyte ratio (NLR), lactate-dehydrogenase (LDH), and C-reactive protein (CRP). Based on the resulting score, pts can be divided in the following categories of risk: low (score <4), intermediate (score 4-6), and high risk (score >7).

Table: 1765P The "Milano Policlinico ONCOVID Score" for risk evaluation in oncology during COVID-19

Variables	Score
Sex	F = 0 M = 1
ECOG PS	0 - 1 = 0 2, or higher = 1
Age	< 70 = 0 70, or higher = 1
BMI	< 30 = 0 30, or higher = 1
Comorbidities	NO = 0 YES = 1 Yes, >1 = 2
Concomitant steroid treatment	NO = 0 YES = 1
Thoracic tumour	NO = 0 YES = 1
History of thoracic RT	NO = 0 YES = 1
Line of cancer treatment	adjuvant = 0 1st, or more = 1
Type of treatment	hormone therapy, targeted therapy, monoclonal antibodies = 0 CT = 1 IT/IT + CT = 2
History of irAEs	NO = 0 YES = 1 YES, pneumonitis = 2
NLR	< 5 = 0 5, or higher = 1
LDH	< ULN = 0 ULN, or higher = 1
CRP	< ULN = 0 ULN, or higher = 1

Conclusions: There is a strong rationale supporting the presented data as potential risk factors for COVID-19 in cancer pts. The present score is currently undergoing validation on a wide population of cancer pts to confirm its role and potentially help physicians' treatment decisions.

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1766P COVID-19 and lung cancer: What do we know?

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Background: Currently we still have limited information on how COVID-19 infection has affected lung cancer patients. In our study, we analysed whether there are differences in terms of mortality from COVID-19 between patients diagnosed with lung cancer and the overall population within our hospital health area (320,000 people). We have also studied the most frequent characteristics of lung cancer patients who develop infection with COVID-19, and we have analysed possible factors of poor prognosis, as well as treatment outcome.

Methods: We performed a retrospective review of a total of 2216 patients admitted to Hospital Universitario Infanta Leonor in Madrid between March 5 and May 13, 2020 to identify the cumulative incidence of COVID-19 in patients with lung cancer and make a description of the characteristics of these patients, treatment outcome, risk factors for poor prognosis and mortality. We performed uni and multivariate logistic regression.

Results: 22/2216 of the total number of patients diagnosed with COVID-19 in our hospital had lung cancer (0.99%). 12/22 lung cancer patients with a COVID-19 diagnosis died (54.5%) vs 300/2216 COVID-19 patients in our hospital ($p < 0.0001$). Lung cancer patients who died had a median age of 72 years (range of 49-84 years). Infection with COVID-19 in lung cancer patients was more frequent in men (72.73%). 18/22 (81.81%) had locally advanced or metastatic tumours. We observed a trend towards higher mortality among patients with hypertension than among non-hypertensive patients (10/15 vs 2/7; $P = 0.095$). We found higher mortality among patients who developed acute respiratory distress syndrome (ARDS) than among those who did not (4/4 vs 8/12; $P = 0.044$). There seems to be a trend towards lower mortality among patients who received treatment with the combination of hydroxychloroquine and azithromycin than among those who did not (6/14 vs 6/8; $P = 0.145$).

Conclusions: Lung cancer patients who became infected with COVID-19 have higher mortality than the general population. It is more frequent among men and the development of ARDS results in a worse prognosis with higher mortality. Although treatment with azithromycin and hydroxychloroquine appears to be a good treatment option, we must wait until we have more data on the safety of the combination and results in larger patient series.

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1767P Hypercoagulable state, CD4+ T-lymphocytopenia, dysregulated cytotoxicity and monocyte upregulation in COVID-19 positive cancer patients presenting with severe pneumonia

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Background: There is growing evidence that cancer patients may be more susceptible to contracting coronavirus disease 2019 (COVID-19) infection, show a more aggressive course and associate a poorer prognosis than the general population. An unbalanced inflammatory response and systemic coagulopathy seem to define the pathological hallmark underlying severe presentations. However, the complex immune cell interplay and the role of the tumor-associated pro-coagulative state in COVID-19 remain a challenge.

Methods: We prospectively evaluated cancer patients presenting to the emergency department of the Hospital Clínico San Carlos (Madrid, Spain) with severe pneumonia, and compared a comprehensive coagulation and immunological profile from blood samples on admission between those with SARS-CoV-2 positive and negative RT-PCR tests.

Results: 14 patients with suspected COVID-19 and receiving in-hospital care were prospectively followed. SARS-CoV-2 RT-PCR was positive on admission in 6 patients, and negative on admission and on re-test in 8 patients. Peripheral blood samples were drawn on admission. In spite of the modest sample size, patients with SARS-CoV-2 positive showed higher levels of D-dimer (median 6,355 vs. 1,964 ng/ml, $p = 0.025$), a decreased CD4⁺/CD8⁺ ratio (1.2 vs. 2.2, $p = 0.17$) at the expense of CD4⁺ T lymphocytopenia (305 vs. 467, $p = 0.18$), and NK cell expansion (17 vs. 9%, $p = 0.13$). Several monocyte activation markers were found to be elevated in RT-PCR positive