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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-lymphocite 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.

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.

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

patients, including CD86 (2.8-fold increase in classic monocytes, p=0.06) and CCR2 (2.9-fold in intermediate monocytes, p=0.17; 11-fold in non-classic monocytes, p=0.03).

Conclusions: In cancer patients presenting with severe SARS-CoV-2 positive pneumonia, the infection may cause a hypercoagulable state, as suggested by higher levels of D-dimer, and unleash a pro-inflammatory response. Marked CD4^{+} T lymphocytopenia and NK expansion may reflect lymphocyte exhaustion and dysregulated cytotoxicity. Monocyte activation and recruitment also seem to be strongly upregulated.

1768P   Caring for cancer patients in the wake of COVID-19 pandemic in Georgia

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Background: On February 26, 2020, Georgia confirmed its first COVID-19 case. The Government of Georgia together with experts in the field work efficiently to prevent massive spread of the virus throughout the country. To better understand how Georgian regulations affected Cancer patient's ability to obtain proper healthcare, New Vision University initiated a survey which included questions about patients experiences accessing health care during COVID-19 pandemic, availability of appointments and services, and concerns about being able to safely obtain needed health care treatments. Non-cancer patients were also asked to fill the questionnaire to compare the results between the cancer and non-cancer patients during COVID-19 pandemic.

Methods: We collected the data from 3 large hospitals located in the main cities of Georgia: Tbilisi, Kutaisi and Batumi. Cancer and no-cancer patients who were admitted to above mentioned hospitals from March 1st till the April 30th for different elective and urgent reasons, excluding emergency cases were included. The survey was conducted anonymously, through telephone conversations, emails and social media according to respondents' preferences. Out of total 1025 patients, we obtained responses from 310 patients, out of which 150 were cancer and 160 — non-cancer patients. Statistical methods have been implicated for analyses of the results.

Results: From all cancer patients, only 24% reported delayed or cancelled care or treatment (overall), while 58% of non-cancer patients confirmed the delay or cancellation. The care/treatment was delayed due to government/hospital policy in 22% of cancer patients. In-person visits been changed to audio or video consultations in 12% cancer and 29% of non-cancer patients. 70% of cancer patients confirm that they felt safe at the hospital. Personal protective equipment was available for 63% of cancer and only for 18% of non cancer patients. Both group of patients stated decline in psychological/ symptomatic care during pandemic (47% and 42%) and problems in transportation to/from hospital (28% and 39%).

Conclusions: We can conclude that care of cancer patients during COVID pandemic in Georgia was delivered optimally and safely, in majority of cases treatment was conducted without delay or cancellation.

1769P   Impact of COVID-19 crisis on multidisciplinary tumour board treatment decisions: A cohort analysis from India

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Background: COVID-19 crisis has posed newer challenges in cancer care with reports of disruption in treatment plans coming from across the world. Massive deluge of COVID-19 incidence in western countries along with the increased risk of fatal complications for active cancer patients made it difficult for cancer patients to maintain continuity of care. In India, a countrywide stringent lockdown has prevented a massive exposure to the population. Here we present a retrospective analysis of the impact of COVID-19 crisis on the deliberations of onco.com online multidisciplinary tumour boards in past 8 weeks.

Methods: We analyzed 342 tumour board cases where an opinion was provided between 2nd week of March & 3rd week of May 2020. Disease characteristics like primary tumour type, stage, and ECOG PS were recorded. A keyword search for COVID-19, Coronavirus, lockdown, treatment delay was performed on the reports to

understand if these were mentioned by oncologists during the deliberations. We tried to look for any recommendations for deviation from standard treatment or postponement of treatment on account of the COVID situation in the reports.

Results: Of the 342 cases, 48 patients were diagnosed with haematological malignancies & rest were solid tumors. 213 cases were being treated with curative intent, 92 patients were being treated with palliative intent & 37 cases had just completed staging evaluation and no treatment was started. We noted that the tumour board recommended a deviation from standard treatment protocol only for 18 cases on account of COVID-19. The rest of 324 cases received a recommendation to continue the standard treatment protocol for their disease condition. The reasons recorded for protocol deviation included patients with oral cavity cancer, metastatic cancer with poor performance status, and patients with multiple comorbidities where they feared a higher risk of complications.

Conclusions: Majority of oncologists in India prefer standard treatment recommendations in their decisions. This could be due to two main factors, a lower infection rate and a much lower case fatality rate (3.4%) from COVID-19 infection as compared to western countries. Still treatments have been delayed not due to change in protocols but due to the lockdown.

1770P   Clinical and epidemiologic aspects of patients with cancer and COVID-19 in a Brazilian cancer center

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Background: Patients with cancer are more likely to develop infections due to a more fragile immune system as a consequence of the oncological treatment, increasing the chance of COVID-19 contamination and higher mortality. This study aims to evaluate the severity of COVID-19 infection in cancer patients, determining the clinical and epidemiological aspects that are associated with worse outcomes.

Methods: We examined the association between cancer patients diagnosed with COVID-19 and respiratory failure, need of Intensive Care Unit (ICU), and death in a medical center in the city of Sao Paulo, Brazil. We included patients with cancer in treatment or in followup that were infected by COVID-19 and excluded those diagnosed with cancer *in situ*, cutaneous squamous cell, and basal cell skin cancer. Active disease was defined as metastatic disease or less than 1 year of finished curative-intent treatment.

Results: Of 90 patients analyzed, the mean age was 56 years-old and 80% were female. Regarding histology, breast cancer represented the majority of cases with 35.6% and cervical cancer 21.1%. Overall, 51.6% were stage IV (55.6% with metastatic disease) and 43.3% of the patients had a good performance status when diagnosed with COVID-19. After initial hospitalization, 30 patients (33.3%) were sent to an ICU. Of the 90 patients initially followed, 34 died (37.7%). Metastatic disease and active disease were related to increased mortality (P=0.041 and P=0.006, respectively).

Conclusions: In this observational study with cancer patients and diagnosed with COVID-19, metastatic disease, and active disease were related to increased mortality. This analysis can help to select which patients may gain with increased isolation and even treatment interruption, reducing exposure to infection.