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### 1575P Systemic anti-cancer therapy and metastatic cancer are independent mortality risk factors during two UK waves of the COVID-19 pandemic at University College London Hospital

A. Sinclair<sup>1</sup>, I. Earnshaw<sup>1</sup>, A. Chowdhury<sup>1</sup>, G. Patel<sup>1</sup>, N. Chopra<sup>1</sup>, E. Merry<sup>1</sup>, G. Soosaipillai<sup>1</sup>, M. Galazi<sup>1</sup>, S. Benaffi<sup>1</sup>, A. Wu<sup>1</sup>, C. Sng<sup>1</sup>, Y.N.S. Wong<sup>1</sup>, D. Ottaviani<sup>1</sup>, H. Shaw<sup>1</sup>, A.J.X. Lee<sup>2</sup>, R. Roylance<sup>2</sup>

<sup>1</sup>Cancer Division, University College London Hospitals NHS Foundation Trust, London, UK; <sup>2</sup>Cancer Services, University College London Hospital NHS Foundation Trust, London, UK

**Background:** Data from the first wave of COVID-19 infection demonstrated that a history of cancer and SACT was associated with poorer outcomes. Our study compares outcomes for cancer patients matched to non-cancer patients between the two waves in order to explore further how cancer and its treatment may impact COVID-19 mortality.

**Methods:** Data was collected for patients with positive PCR and history of cancer between 1 Mar to 20 May 2020 and 1 Dec to 8 Feb 2021 for wave 1 and 2, respectively. A contemporaneous cohort of patients without cancer were age- and sex-matched for comparison.

**Results:** The total number of patients presenting with COVID-19 was higher in wave two (1135 vs 626). 207 of these patients had cancer, and were matched to 452 patients without cancer from both waves. There was a significantly improved chance of mortality in wave 2 (HR 0.41,  $p < 0.0001$ ). When adjusting for age, sex and comorbidities, cancer was an independent risk factor for mortality amongst patients hospitalised with COVID-19 in wave 1 (HR 1.62,  $p = 0.02$ ), but not in wave 2. There was a trend towards improved survival for hospitalised patients in wave 2 receiving COVID-19 specific treatment including dexamethasone, remdesivir, tocilizumab (HR 0.75,  $p = 0.086$ ). For the combined cancer cohort, SACT was an independent predictor of mortality, as was metastatic disease.

Table: 1575P		
	HR (95% CI)	P-value
Malignancy status		
Metastatic	2.1 (1.02 - 4.34)	0.04
Active cancer	0.55 (0.28 - 1.08)	0.08
Active anti-cancer treatment	1.75 (0.97 - 3.18)	0.06
SACT	2.01 (1.10 - 3.66)	0.02
Cytotoxic chemotherapy	1.93 (0.93 - 4.00)	0.08
Endocrine therapy	1.66 (0.69 - 3.96)	0.25
Targeted therapy	0.84 (0.11 - 6.28)	0.86
Immunotherapy	1.73 (0.4 - 7.41)	0.46
Radiotherapy	2.04 (0.62 - 6.74)	0.24
Surgery	0.67 (0.09 - 4.98)	0.69

**Conclusions:** The mortality for both cancer and non-cancer patients improved between waves of the pandemic. Advances in detection, prevention and treatment may account for this. Cancer was no longer a risk factor for mortality in the second wave, however SACT and metastatic cancer remained risk factors for mortality within the cancer cohort. This emphasises the need for ongoing protection of patients with advanced cancer and those on SACT, including through their prioritisation for COVID-19 vaccination globally.

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### 1576P COVID-CANCER HUIL - Registry of oncological patients with diagnosis of COVID-19 at Hospital Universitario Infanta Leonor in Madrid (Spain): One year of pandemic

J. Rogado, B. Obispo, M. Pérez-Pérez, A. Martín-Marino, J.L. García-López, A. Lopez-Alfonso, C. Pangua, G. Serrano-Montero, M.A. Lara

Medical Oncology Department, Hospital Universitario Infanta Leonor, Madrid, Spain

**Background:** During the first year of the SARS-CoV-2 pandemic the management and treatment of COVID-19 have been improved. However, cancer patients continue to be one of the most affected. We evaluate the mortality rate due to COVID-19 and associated risk factors in the cancer population diagnosed in our center during the first year of pandemic.

**Methods:** We retrospectively reviewed the medical records of 189 cancer patients who were diagnosed with COVID-19 between March 5, 2020 and February 28, 2021. Mortality rate and associated risk factors were studied.

**Results:** Mortality rate: 55/189 patients. Mean age: 72 years (34-95), 125/189 male patients. Predominant histologies: lung cancer (72/189), colorectal (31/189), breast (24/189). Predominant staging: metastatic disease (113/189). Predominant cancer treatment: chemotherapy (63/189); 118/189 patients were receiving any type of oncological treatment with palliative intention. Mortality was associated with male gender (45/55 vs 10/55,  $p=0.004$ ), presence of comorbidities (48/55 vs 7/55,  $p=0.01$ ), lung cancer (28/72 deaths with this tumor vs 27/117 with the rest,  $p=0.02$ ), palliative intention cancer treatment (41/55 vs 12/55,  $p=0.02$ ), older median age (76 vs 71,  $p = 0.02$ ), higher median CRP ( $p=115.6$  mg/dl vs 46 mg/dl), lower median lymphocytes (600/mm<sup>3</sup> vs 1000/mm<sup>3</sup>  $p<0.001$ ). No specific treatment against COVID-19 significantly decreased mortality. Neither IL-6 nor ferritin were prognostic biomarkers. In multivariate analysis, male gender (OR 2.58, 95% CI 1.1-5.9,  $p = 0.02$ ), lung cancer (OR 2.0, CI 1.0-3.8,  $p = 0.03$ ), cancer treatment with palliative intention (OR 2.4, CI 1.07-5.3,  $p = 0.03$ ), higher median CRP (OR 1.0, CI 1.00-1.01,  $p < 0.001$ ), as well as low lymphocyte median (OR 0.5, CI 0.25-1.0,  $p = 0.56$ ), continued to be evidenced as risk factors, regardless of comorbidities, staging, sex, and palliative intention cancer-specific treatment, among other variables.

**Conclusions:** Men with lung cancer under cancer-specific treatment with palliative intention who present, at the diagnosis of SARS-CoV-2 infection with elevated CRP above 115 mg/dl and a decrease in lymphocytes below 600/mm<sup>3</sup> have a higher risk of presenting fatal complications.

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### 1577P Early mortality linked to COVID-19 in cancer patients as compared to historical control in pre-pandemic times

R. Dienstmann<sup>1</sup>, P. De Marchi<sup>2</sup>, M. Costa e Silva<sup>3</sup>, M. Menezes<sup>1</sup>, H. Cruz<sup>3</sup>, R. Paes<sup>3</sup>, J. Alves da Silva<sup>4</sup>, A.C. Messias<sup>3</sup>, J.A.F. Canedo<sup>1</sup>, A.C. De Melo<sup>2</sup>, T. Reinert<sup>5</sup>, A. Jacome<sup>6</sup>, B.S. Ferreira<sup>4</sup>, C. Mathias<sup>7</sup>, C.H. Barrios<sup>5</sup>, C. Gil Ferreira<sup>2</sup>, B.L. Ferrari<sup>6</sup>

<sup>1</sup>Medical Oncology, Oncoclínicas Group, São Paulo, Brazil; <sup>2</sup>Medical Oncology, Oncoclínicas Group, Rio De Janeiro, Brazil; <sup>3</sup>Data Science, Oncoclínicas Group, São Paulo, Brazil; <sup>4</sup>Oncoclínicas Group, São Paulo, Brazil; <sup>5</sup>Medical Oncology, Oncoclínicas Group, Porto Alegre, Brazil; <sup>6</sup>Medical Oncology, Oncoclínicas Group, Belo Horizonte, Brazil; <sup>7</sup>Medical Oncology, Oncoclínicas Group, Salvador, Brazil

**Background:** The COVID-19 pandemic remains a public health emergency of global concern, with higher mortality rates in cancer patients as compared to the general population. However, early mortality of COVID-19 in cancer patients has not been compared to historical real-world data from oncology population in pre-pandemic times.

**Methods:** Longitudinal multicenter cohort study of patients with cancer and confirmed COVID-19 from Oncoclínicas Group in Brazil from March to December 2020. The primary endpoint was 30-day mortality after isolation of the SARS-CoV-2 by RT-PCR. As historical control, we selected patients from Oncoclínicas Data Lake treated before December 2019 and propensity score-matched to COVID-19 cases (3:1) based on the following clinical characteristics: age, gender, tumor type, disease setting (curative or palliative), time from diagnosis of cancer (or metastatic disease) to COVID-19 infection.

**Results:** In total, 533 cancer patients with COVID-19 were prospectively registered in the database, with median age 60 years, 67% females, most frequent tumor types breast (34%), hematological (16%), gastrointestinal (15%), genitourinary (12%) and

respiratory tract malignancies (10%). Most patients were on active systemic therapy or radiotherapy (84%), largely for advanced or metastatic disease (55%). In the overall population, early death rate was 15%, which was numerically higher than the Brazilian general population with COVID-19 diagnosis in 2020 (2.5%). We were able to match 442 cancer patients with COVID-19 to 1,187 controls with cancer from pre-pandemic times. The 30-day mortality rate was 12.4% in COVID-19 cases as compared to 5.4% in pre-pandemic controls with cancer (Odds Ratio 2.49, 95%CI 1.67 - 3.70; P value < 0.01, Power 97.5%). COVID-19 cancer patients had significantly higher death events than historical controls (Hazard Ratio 2.18, 95%CI 1.52 - 3.12; P value < 0.01, Power 99.7%), particularly from 20 to 30 days after diagnosis of the infection.

**Conclusions:** Cancer patients with COVID-19 have an excess mortality 30 days after the infection when compared to matched cancer population from pre-pandemic times and the general population with COVID-19, reinforcing the need for priority vaccination in public health strategies.

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### 1578P Clinical outcomes of patients with cancer who tested positive for COVID-19 hospitalised in a UK district general hospital

A. Amjad<sup>1</sup>, N. Hopkins<sup>1</sup>, K.V. Kamposioras<sup>2</sup>, K.H.J. Lim<sup>2</sup>

<sup>1</sup>Medicine, Tameside and Glossop Integrated Care NHS Foundation Trust, Manchester, UK; <sup>2</sup>Medical Oncology Dept., The Christie NHS Foundation Trust, Manchester, UK

**Background:** Individuals diagnosed with cancer have been particularly affected by the COVID-19 pandemic. Most of the relevant information so far has come from tertiary cancer centres and less is known of the outcomes of patients in District General Hospitals (DGH). In this audit, we aimed to investigate the clinical outcomes of patients with cancer who tested positive for COVID-19 and were admitted in a DGH.

**Methods:** Electronic records of patients admitted at Tameside General Hospital (TGH) (>500 beds) between March 2020–March 2021 were reviewed retrospectively. Clinical outcomes of those who tested positive for COVID-19 and factors relating to death were analysed. Cox regression and Kaplan-Meier survival analyses were performed (SPSS v26.0).

**Results:** Within the 12-month study period, there were 2417 inpatients who tested positive for COVID-19 at TGH. Of 235 individual patients with cancer admitted during this period, 14% (n=33) tested positive. Median age was 75 (68;81) years; majority female (67%). The most prevalent primary site of cancer were lung (21%) and breast (12%). Most were ECOG PS 1 (39%) or PS 2 (36%), and had high Charlson Comorbidity Index (median 5 (3;6), range 0-10). 24% of patients were on curative treatment, 39% palliative treatment, 18% best supportive care and 18% not on treatment. Types of treatment included chemotherapy (37%), hormonal treatment (26%), radiotherapy (21%) and immunotherapy (5%). On average, patients were admitted at least once (range 0-4) prior to positive test for COVID-19. At last follow-up, there were n=664/2417 (27%) and n=22/33 (67%) deaths in the non-cancer and cancer patient subgroups, respectively. The median time from diagnosis of COVID-19 to death/censor date was 44 (4;85) days. In univariate Cox regression analysis, only ECOG PS was significantly correlated with death, HR 1.523 (95% CI 1.064-2.181, p=0.022).

**Conclusions:** The outcomes of our cohort of patients with cancer who tested positive for COVID-19 and hospitalised were poor. The high comorbidity burden and poor ECOG PS could potentially account for this rather than the recent oncological treatment. Acute oncology input to general medical teams treating cancer patients with COVID-19 is pivotal for best possible outcomes for patients.

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### 1579P The risk of severe/critical COVID-19 infection in patients diagnosed with solid malignancies: Two center experience from Armenia

N. Karapetyan<sup>1</sup>, S. Danielyan<sup>2</sup>, L. Safaryan<sup>2</sup>, L. Harutyunyan<sup>3</sup>, A. Avagyan<sup>3</sup>, G. Tamamyanyan<sup>4</sup>, T. Arakelyan<sup>4</sup>, J. Arakelyan<sup>2</sup>, S. Bardakhchyan<sup>2</sup>, M. Harutyunyan<sup>1</sup>, A. Sargsyan<sup>4</sup>, M. Mailyan<sup>4</sup>, M. Sargsyan<sup>4</sup>, M. Rushanyan<sup>2</sup>, G. Mkrtchyan<sup>4</sup>, A. Galoyan<sup>1</sup>, D. Zohrabyan<sup>2</sup>

<sup>1</sup>Medical Oncology Dept., Yerevan State Medical University, Yerevan, Armenia;

<sup>2</sup>Medical Oncology Dept., Hematology Center after professor R.H. Yeolyan, MOH, RA, Yerevan, Armenia; <sup>3</sup>Medical Oncology Dept., Institute of Surgery after A. Mikaelyan, Yerevan, Armenia; <sup>4</sup>Pediatric Cancer and Blood Disorders Center of Armenia, Hematology Center after professor R.H. Yeolyan, MOH, RA, Yerevan, Armenia

**Background:** Nowadays, the data on Coronavirus Disease 2019 (COVID-19) among cancer patients is controversial. It is debatable whether cancer patients are at a significantly higher risk of severe COVID-19. The current study aims to assess the risk of severe and critical COVID-19 cases among patients receiving systemic anticancer treatment (SACT).

**Methods:** This was a retrospective cohort study utilizing census sampling. The data was obtained through medical records. Inclusion criteria: COVID-19 diagnosis through RT-PCR/chest CT among those who received SACT in the Chemotherapy Departments of Hematology Center after prof. Yeolyan and Institute of Surgery after Mikaelyan Yerevan, Armenia between March 1, 2020, and February 1, 2021. Descriptive analysis was done to characterize the cohort. We run logistic regression to evaluate the risk of COVID-19 severity (mild, severe/critical) among those receiving SACT (high, intermediate, and low-risk protocols of febrile neutropenia (FN), age, gender, smoking status, comorbidities).

**Results:** In total 75 cancer patients were diagnosed with COVID-19 in both centers. Data of only 72 patients were analyzed, as the outcome variable of the excluded patients was unknown. The male-to-female ratio was 1:1.5, age range was 31-80 years (median age: 61). The patients received SACT with high (13.9%), intermediate (63.9%), and low (8.3%) risk for FN. The others did not receive SACT at the moment of COVID-19 diagnosis. Infection-associated pneumonia was developed in 63% of cases. Mild COVID-19 was diagnosed in 76.4% and severe/critical in 23.6% of cases. Infected patients' hospitalization rate was 28%. The case fatality rate was 8%. Only patients who underwent SACT at the time of COVID-19 infection were included in logistic regression analysis (n=62). Significant association between COVID-19 severity and the risk of SACT-induced FN, gender, smoking status, comorbidities was not found. Contrary, COVID-19 severity was significantly associated with age when adjusted to other predictors ( $p=0.017$ , 95% CI = 1.021-1.230).

**Conclusions:** Thus, we demonstrate the lack of rationale to reschedule SACT during the pandemic as it does not affect the COVID-19 severity and may bring unnecessary treatment delays.

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### 1580P Impact of COVID-19 infection on breast cancer patients: Experience in Latin-American country ACHOCC-19B study

A.V. Ospina Serrano<sup>1</sup>, R. Bruges<sup>2</sup>, W. Mantilla<sup>3</sup>, I. Triana<sup>1</sup>, P. Ramos<sup>4</sup>, S. Aruachan<sup>5</sup>, A. Quiroga<sup>6</sup>, I. Munevar<sup>7</sup>, J. Ortiz<sup>8</sup>, N. Llinas<sup>9</sup>, P. Pinilla<sup>10</sup>, H. Vargas<sup>8</sup>, H. Idrobo<sup>11</sup>, A. Russi<sup>10</sup>, R. Manneh<sup>12</sup>, G. Rivas<sup>13</sup>, H. Gonzalez<sup>14</sup>, D. Santa<sup>15</sup>, J. Insuasty<sup>16</sup>, L. Bernal<sup>4</sup>

<sup>1</sup>Oncology Department, Fundacion Sta Fe de Bogota Instituto de Oncologia, Bogota, Colombia;

<sup>2</sup>Oncology, Instituto Nacional de Cancerologia, Bogota, Colombia;

<sup>3</sup>Oncology, Fundación Cardioinfantil, Bogota, Colombia; <sup>4</sup>Oncology, Clinica Universitaria Colombia, Bogota, Colombia; <sup>5</sup>Oncology, IMAT, Monteria, Colombia;

<sup>6</sup>Oncology, Hospital Pablo Tobon Uribe, Medellin, Colombia; <sup>7</sup>Oncology, Hospital Militar Central, Bogota, Colombia; <sup>8</sup>Oncology, Hospital Universitario del Valle, Cali, Colombia;

<sup>9</sup>Oncology, Clinica Vida, Medellin, Colombia; <sup>10</sup>Oncology, Centro Javeriano de Oncologia, Bogota, Colombia; <sup>11</sup>Oncology, Christus Sinergia, Cali, Colombia;

<sup>12</sup>Oncology, Sociedad de Oncologia y Hematologia del Cesar, Valledupar, Colombia;

<sup>13</sup>Oncology, Clinica del Occidente, Cali, Colombia; <sup>14</sup>Oncology, Centro de Cancerologia de Colombia, Ibaguè, Colombia; <sup>15</sup>Oncology, Clinica Medellin, Medellin, Colombia;

<sup>16</sup>Oncology, Hospital Universitario de Santander, Bogota, Colombia

**Background:** There are not specific information about outcomes of COVID-19 infection in patients with breast cancer. We aimed to describe the outcomes in this population in our national cohort of patients with cancer and infection for COVID-19.

**Methods:** ACHOCC-19B registry is a multicenter observational study composed of a cross-sectional and a prospective cohort component. Eligibility criteria were the diagnosis of breast cancer and COVID-19 infection confirmed with RT-PCR. Follow-up of 30 days was completed. Clinical data were extracted of the multicentric register of cancer and covid-19 in Colombia (ACHOCC-19), collected from Apr 1 until Oct 31, 2020. The primary outcome was 30-day mortality from all causes and secondary