Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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are warranted to assess the reliability of PFU compared to standard FU visit to implement telemedicine in daily clinical practice.

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1731P Molecular diagnostics for cancer patients and high-risk individuals during the SARS-CoV-2 pandemic at the Institute for Oncology and Radiology of Serbia

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Background: The SARS-CoV-2 pandemic introduced a dangerous distraction effect in all aspects of oncological patients’ care. The aim of this research was to explore the effect of the pandemic on the efficacy of the largest molecular diagnostics centre for cancer patients and high-risk individuals in Serbia (IORS).

Methods: EGFR, KRAS, BRAF, BRAFV600E mutation testing of advanced lung adenocarcinoma, metastatic colorectal, metastatic melanoma and ovarian cancer patients were performed by qPCR and NGS. NGS was also used for panel testing of hereditary breast cancer and cancers associated with Lynch syndrome. IORS’s analytical output during the two-month long state of emergency was compared to the two-month period prior to the outbreak.

Results: A 57% reduction (188 vs. 81) in the total number of patients that were referred to IORS for targeted molecular testing was detected (EGFR - prior to initiation of TKI therapy 55 vs 26 patients, at progression 21 vs 4; KRAS 73 vs 34, BRAF 39 vs. 17). Due to the prolonged transport of the necessary consumables and the fact that two essential laboratory personnel were absent from the Institute (sensitive category 17), delivery of consumables for diagnostics output of the centralized molecular diagnostics for cancer patients and high-risk individuals in Serbia (IORS).

Conclusions: The SARS-CoV-2 pandemic had a profound negative effect on the overall diagnostic output of the centralized molecular diagnostics for cancer patients and high-risk individuals in Serbia. This effect will be further evaluated through the analysis of both the survival and quality of life of the cancer patients that were unable to receive targeted therapies in a timely efficient manner. The only positive effect of the pandemic was that the waiting lists for genetic testing of high-risk individuals were shortened.

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1732P Prognostic indicators for COVID-19 related deaths in patients with cancer

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Background: The COVID-19 pandemic has impacted significantly on health systems across the globe. It has been reported to have higher incidence and to be associated with worse outcomes in patients with cancer. Beaumont Hospital is a large Dublin-based teaching hospital which was at the centre of the Irish outbreak of COVID-19.

Methods: During the period 11th March to 15th May 2020, patients diagnosed with COVID-19 infection who were attending Beaumont Hospital for systemic anti-cancer therapy were included. Data were collected by chart review. Statistical analyses were performed using SPSS. Cancer-related prognosis was estimated using the Palliative Prognostic Score (PAP) with a score ≥11 associated with a 30-day survival of <30%.

Results: In total, 717 patients attended oncology services for cancer directed treatment during the study period. 27 of these patients were diagnosed with COVID-19 based on RT-PCR. A further 4 patients were diagnosed clinically due to characteristic symptoms and radiology. The median age was 60 (38-84). 12 (39%) were female. The most common cancer type was lung n=9 (29%). 21 (67%) had metastatic disease; 4 (13%) locally advanced disease and 6 (19%) were being treated with curative intent. Of the 31 patients diagnosed with COVID-19, 25 (80%) were hospitalised and none were admitted to intensive care. In total, 12/31 (41%) died, of which 5 (41%) had lung cancer, 10 (83%) had an PS of ≥3 and 3 (25%) had received systemic anti-cancer treatment in the last 30 days of life. The median age was 66 (38-84). 4 (33%) were female. All had incurable, locally advanced or metastatic disease. The mean time from diagnosis to death was 9.5 days. Those with an ECOG performance status (PS) ≥3 were more likely to die than those with PS <2 (p<0.001). Compared to those who received, patients who died from COVID-19 had higher mean number of organs affected by cancer (3.7 vs. 1.8, p=0.015) and higher mean MAP score (9.6 vs. 1.5, p<0.001).

Conclusions: Patients with cancer who contracted COVID-19 and died had more sites of metastatic disease, a poorer performance status, and a higher Palliative Prognostic Score. The presence of multi-organ involvement appears to predict for poorer outcomes in COVID-19 positive cancer patients.

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Table: 1733P

| VARIABLE          | OTHER CANCER N=34 | LUNG CANCER N=12 |
|-------------------|------------------|-----------------|
| Male              | 52.9             | 50              |
| Age mean          | 63.9             | 63.5            |
| Active Smoking    | 0                | 16.7            |
| Ex-smokers        | 35.3             | 50              |
| COMORBIDITIES     |                  |                 |
| Coronary heart    | 8.8              | 16.7            |
| disease           |                  |                 |
| Hypertension      | 35.3             | 41.7            |
| COPD              | 8.8              | 16.7            |
| Dyslipidemia      | 23.5             | 25              |
| STAGE             |                  |                 |
| IV                | 52.9             | 50              |
| SYMPTOMS          | p                |                 |
| Neutropenia       | 6.1              | 0.1             |
| Cough             | 67.6             | 41.7            |
| Temperature       | 37.1             | 37.3            |
| Dyspnoea          | 47               | 91.7            |
| Diarrhea          | 8.8              | 8.3             |
| Lymphopenia       | 68.7             | 36.4            |
| PROGNOSTIC CRITERIA |              |                 |
| ILD               | 0.9 (0.6; 2.2)   | 0.9 (0.5; 2.7)  |
| D-DIMER           | 107.7            | 44              |
| PCR               | 266 (207; 326)   | 290 (238; 352)  |
| LDH               | 562 (358; 933)   | 1111 (392; 2672) |
| FERRITIN          | 8 (6; 9)         | 8 (6; 9)        |
| CHARLSON          | 3 and 3 (25%)    | 3 (25%)         |
| INDEX*            | 0.9              | 0.1             |
| CURB65 SCALE **  |                  |                 |
| BRESCIA SCALE     | 0.9              | 8.8             |

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CoV-2 infection during the same period 4.3% (95%CI; 3.6-5.2) p<0.001. Among 653 patients receiving active cancer therapy during this period, 24 (3.7%) developed COVID-19 and required admission, 4.2% of whom were receiving chemotherapy, 9.5% immunotherapy and 2.1% targeted therapies. Lung and breast cancer were the most frequent (26.1%), followed by colorectal (19.6%) and breast cancer. No significant differences due to the cancer treatment received were observed. Mortality in lung cancer patients was the highest (25%). The univariate analysis (between p who developed serious event vs. those who did not), showed that higher Bresca, CURB-65 scale, lactate dehydrogenase (LDH) or C-reactive protein (CRP) levels at admission, the greater risk of developing severe complications (p<0.05).

Conclusions: Patients with cancer, especially lung cancer, and SARS-CoV2 infection have a worse overall prognosis than the general population. Objective parameters such as LDH, CRP at admission, Bresca index or CURB-65 should alert us to a more serious evolution and suggest early an intensive care unit (ICU) admission.

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Table: 1734P Univariate analysis of risk factors for mortality in COVID-19

| Variable                  | Alive | Dead | p-value |
|---------------------------|-------|------|---------|
| Age (years)               | 67.0 (56.3 - 78.0) | 75.0 (68.3 - 83.0) | <0.01 |
| South Asian ethnicity *   | 16 / 8 | 20 / 17 | 0.03 |
| Cardiovascular disease *  | 41 / 20 | 36 / 31 | 0.04 |
| Cerebrovascular disease   | 23 / 11 | 26 / 22 | 0.02 |
| Chronic kidney disease *  | 17 / 8 | 21 / 18 | 0.02 |
| Hypertension *            | 92 / 46 | 68 / 58 | <0.05 |

* shown as n / %, $ shown as median (IQR)

Conclusions: Along with known risk factors, cancer confers an independent risk for mortality in COVID-19. Taken together, our findings support the need to continue ‘shielding’ patients with cancer from exposure to COVID-19 infection. Increasing age and co-morbidity should take precedence when weighing up risk factors for severe COVID-19 infection in cancer patients.

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1735P SARS-CoV-2 infection induces EMT-like molecular changes, including ZEB1-mediated repression of the viral receptor ACE2, in lung cancer models

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Background: SARS-CoV-2 infection is the cause of the respiratory illness COVID-19, which presents most frequently with respiratory symptoms. SARS-CoV-2 cell entry requires interactions with ACE2 and TMPRSS2 on the surface of the host cell. Cancer patients and, specifically, those with thoracic malignancies seem to experience poorer clinical outcomes.

Methods: We utilized bulk and single-cell transcriptional data from a combination of normal and malignant tissues and cells from aerodigestive and respiratory tracts to explore mechanisms governing the expression of ACE2 and TMPRSS2. Additionally, we determined the effect of EMT induction, ZEB1 modulation, and SARS-CoV-2 infection on ACE2 expression.

Results: Our bulk data suggests that aerodigestive and lung cancer models express a broad range of ACE2 and TMPRSS2, particularly in epithelial cells, and would serve as good models for studying SARS-CoV-2 infection. We assessed the relationship between ACE2 and epithelial differentiations in numerous datasets, and found consistent positive correlations with transcriptional and microRNA signifiers of epithelial differentiation. The miR-200 family – zinc finger E-box-binding homeobox 1 (ZEB1) pathway, which is an established regulator of EMT, also directly regulates ACE2 expression, likely via putative ZEB1 repressor sites located in the ACE2 promoter. Furthermore, SARS-CoV-2 infection reduces ACE2 expression and shifts cells to a more mesenchymal phenotype with loss of EPCAM and upregulation of ZEB1 and other EMT-associated genes.

Conclusions: ACE2-positive cells are almost exclusively epithelial and unexpectedly rare, considering the devastating impact of this infection. Following viral entry, SARS-CoV-2 infection induces molecular changes within the cells that are reminiscent of EMT, including increased ZEB1. ZEB1, in turn, appears to directly repress the expression of ACE2. This SARS-CoV-2-induced ACE2 deficiency, compounded by the downregulation of genes, including claudins, which play a critical role in restricting epithelial and endothelial permeability, exposes respiratory cells to increased risk of edema and acute respiratory distress syndrome (ARDS).

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1736P Elevated AXL expression following SARS-CoV-2 infection in non-small cell lung cancer

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Background: Patients with thoracic cancers affected by the coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), that have poor clinical outcomes. AXL, a TAM (Tyro3, Axl, Mer) family receptor tyrosine kinase, is a known mediator of epithelial to mesenchymal transition (EMT) and therapeutic resistance in non-small cell lung cancer (NSCLC) and other cancers. Additionally, AXL plays a role in efficient Ebola and Zika viral entry and...