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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1714P

Change of circulating pro-inflammatory markers between pre-COVID-19 condition and COVID-19 diagnosis predicts early death in cancer patients: The FLARE score

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Background: Inflammation plays a central role in severe COVID-19 disease. Likewise, in cancer patients (pts), a circulating pro-inflammatory status (proinflam-status) is associated with poor outcomes. We aimed to assess if a proinflammation status induced by cancer can negatively impact on COVID-19 outcomes.

Methods: Multicenter retrospective cohort of cancer pts with SARS-CoV-2 infection across 12 international centers. Circulating inflammatory markers were collected at two timepoints: pre-COVID condition (-15 to -45d before COVID-19 diagnosis) and COVID-19 diagnosis. Tumor-induced proinflammation was defined by >100% increase of dNLR between both timepoints.

Results: 287 pts were enrolled with a median follow-up of 23d [95%CI 22-26]. Median age was 69 (range 35-98), 52% were male and 49% had hypertension. As per cancer characteristics: 68% had active disease, 52% advanced stage and 79% had a baseline PS-1. Thoracic cancers were the most common (26%) and 61% of pts were under chemotherapy. The dNLR was high in 24% pre-COVID condition vs. 55% at COVID-19 diagnosis. Median change between both timepoints was -67% [IOR: 0% to +153%]; 40% had >100% increase of dNLR. Pts distribution across FLARE groups were: 5% in poor (n=9), 20% in T-only (n=39), 35% in I-only (n=69) and 40% in favorable (n=80).

Conclusions: Both tumor and infection-induced proinflammation status impact on COVID-19 outcomes in cancer pts. The FLARE score, based on simple dynamics between two timepoints, allows to identify the population at higher risk for early death.

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Table: 1715P

| Gr 4 | Hosp | Inf | Sep | All Gr T | Gr 2/3 T | Gr 3 T | Bop |
|------|------|-----|-----|----------|----------|-------|-----|
| Pegfilgrastim | 42.9% | 11.4% | 5.71% | 0% | 68.6% | 20% | 85.7% |
| Plinabulin | 44.8% | 13.8% | 6.90% | 3.44% | 24.1% | 3.4% | 0% |

p-value | NS | NS | NS | NS | 0.0002 | 0.025 | 0.06 |

Conclusions: Plinabulin in favor of pegfilgrastim. The Pegfilgrastim group has a lower risk of developing bone pain. Plinabulin is a more favorable option for the prevention of chemotherapy induced neutropenia (CIN) than pegfilgrastim (Peg) during the COVID-19 pandemic

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Background: Due to COVID-19, the NCCN Myeloid Growth Factor Panel expanded prophylactic G-CSF use to chemotherapy with Intermediate Risk (10%-20% risk) of Febrile Neutropenia (FN), and to Low Risk FN patients (pts) who previously developed FN. Preservation of resources for COVID-19 pts by reducing hospitalizations and emergency room visits by cancer chemotherapy pts is the intent of these changed recommendations. Other recommendations include use of self-injecting or on-body injector Peg, to minimize COVID-19 exposure at outpatient center by cancer pts and limiting prophylactic platelet transfusion to preserve blood product supply. Plin is an attractive alternative: it is a novel, non-G-CSF small molecule with CIN protection comparable to Peg, is given once 30 minutes after Chemo, and avoids the need for healthcare system touches on Day 1-3 for G-CSF administration. In contrast to Peg, Plin does not cause bone pain and thrombocytopenia and maintains quality of life.

Methods: We compared the combined CIN data with single agent [SA] Plin 20 mg/m2 (n=29) vs. SA Peg 6mg (n=35) from 2 different phase II CIN studies over 4 cycles: 1) 223 pts with NSCLC pts given either Peg 6mg or Plin given as a 40 mg fixed dose. Both groups were comparable in terms of prior exposure to CIN, physical status, and comorbidities. The primary endpoint was the combined CIN data (SA Plin phase III trials for CIN.

Clinical trial identification: NCT03120626, NCT03294577.

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1716P

Vigil plasmid (VP), a dual bi-shRNA-furin/GMCSF construct from cancer to SARS-CoV-2

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Background: SARS-CoV-2 genome reveals a unique furin cleavage site change at S1/S2 junction. Both tumor and furin-like S2 cleavage site which promotes membrane fusogenic pathway entry and exit to human host cells. Clinical testing of VP, used in an autologous tumor vaccine (Vigil), demonstrates >90% knockdown of TGFβ, a downstream furin protease product, evaluation of GMCSF and safety and benefit in solid tumor cancer patients.

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Methods: Lyophilized (Lyo) VP blended with GPF was stabilized with w/v Trehalose to ≤5 micron particle size for deep lung entry. Significant GPF expression was demonstrated (Neucleom Cellometer) and restriction enzyme mapping confirmed molecular structure. GMCSF and TGFβ expression (Protein Simple ELLA cytokine production) in CCL247 and RDES cell lines validated for performance of FDA defined clinical protocol validation assay was done. Function was determined for both electroperoration (BioRad) and lipid-based reagent [Lipofectamine (Lipo) 3000]

Results: Transfection efficiency and cytokine expression of non Lyo and Lyo VP with and without electroporation (Zap) are shown below:

Conclusions: Lyophilization of VP is feasible for pulmonary aerosol delivery. Inhaler delivery provides direct access of VP to the primary infectious site of SARS-CoV-2, establishes a novel opportunity for lung active uptake by alveolar cells as well as a home use therapy. Favorable results pending virus plaque assay and in vivo studies will inform initiation of large animal safety concurrent with phase I testing (FDA Tech Watch Committee March 31, 2020).

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1717P

Behavioral practices of cancer patients during COVID-19 pandemic: A Middle East and North Africa Study

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Background: Cancer patients are vulnerable population that are exposed to different risks and harms during COVID-19 pandemic. Our study goal is to evaluate the behavioral response of cancer patients to the pandemic in countries of the Middle East and North Africa (MENA) region.

Methods: A cross-sectional study was conducted using a validated questionnaire administered via SurveyMonkey® to cancer patients in 13 centers in 6 countries in the MENA region: namely, Saudi Arabia, Kuwait, Jordan, Egypt, Algeria, and Morocco. The tool included 45 questions inquiring about patients’ demographics and behavioral practices during the crisis.

Results: 1,012 patients were enrolled in the study between April 21 and May 15, 2020. Median age was 50 years (14-92), 67% were females, 39% had a college degree, and 75% were married. Most common reported cancer was breast cancer (40%) followed by gastrointestinal malignancies (15%). Only 3% know someone who has COVID-19 infection. Patients were worried about contracting the infection strongly (33%) or mildly (48%). Reporting strict adherence to precautions included avoiding the following actions: hand washing (83%), wearing masks in public areas (77%), social gathering (98%), meeting friends (91%), and visiting markets (80%). On the other hand, they were doing the following: repeated hand washing (77%), keeping distance from others (67%), using masks in public areas (77%), hand sanitizer (69%) and soap (81%). Some of the patients reported adopting healthier diet (35%), using dietary supplement (18%), reciting Quran (61%) or supplications (75%). About 23% of them will choose not to show up for scheduled medical appointment and 43% had appointment cancellation or request from medical team (31%) or patients themselves (12%). However, treatment session cancellation occurred per request from medical team in (11%) or patients in (4%). Interestingly, 84% of participants prefer virtual appointments over regular visits.

Conclusions: Majority of cancer patients in the study are adopting adequate precautions to prevent exposure to infection. Further studies are required to evaluate the patients' emotional well-being and other harms resulted from the pandemic to prevent detrimental effect on patients outcome.

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1718P

A French experience on COVID-19 and cancer from an academic general hospital in Paris area

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Background: Cancer is considered as a crucial risk factor for adverse outcomes from coronavirus disease 2019 (COVID-19). There is currently few data available about the impact of the virus on patients (pts) treated for cancer, mainly coming from Comprehensive Cancer Centres. In April 2020, the Italian Medical Council reported an analysis on 909 pts who died from COVID-19, of whom 16.5% had cancer. Recently, Gustave Roussy Institute in Paris published a series of 137 cancer patients presenting COVID-19. Here, we report our experience in Foch Hospital in Paris, an academic general hospital located in one of the two main epicentres of the epidemic in France.

Methods: We analysed the totality of pts diagnosed with COVID-19 in our hospital including the emergency unit, as well as the pts currently treated for cancer in our two Medical Oncology and Pulmonology departments.

Results: We identified 49 pts presenting COVID-19 from March 2nd until May 11th, 2020. All of them were receiving standard medical treatment and care for cancer, in curative and palliative settings. Median age was 68 years. Eastern Cooperative Oncology Group (ECOG) Performance Status was respectively: 0-1 (67%), 2-3 (31%), 4 (2%). Twenty-two percent of pts were in curative situation and 78% in palliative situation. Twenty-one (43%), 12 (25%), 8 (16%) and 3 (6%) pts had a lung, genito-urinary, gastro-intestinal and head and neck cancer respectively. Moreover, 2 (4%), 2 (4%) and 1 (2%) pts had a breast, gynaecological and mesothelioma cancer respectively. Six percent of pts presented severe disease needing treatment in intensive care unit. Global mortality rate was 22%. Eight percent of our pts were receiving immunotherapy, and none of these presented a serious clinical presentation. At the hospital level, cancer patients represented 7.8% of the subjects with a diagnosis of COVID-19, 5% of patients hospitalized, and 3% of patients in intensive care unit. Forty percent of patients who died had a cancer.

Conclusions: COVID-19 greatly impacted old and fragile patients. The results of our cohort are comparable to the data reported in a Comprehensive Cancer Centre of Paris area. It is also remarkable that pts treated with immunotherapy seem to present a less severe disease, without any patient needing intensive care.

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