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Methods: Lyophilized (Lyo) VP blended with GFP was stabilized with w/v Trehalose to ≤ 5 micron particle size for deep lung entry. Significant GFP expression was demonstrated (Nexcelom Cellometer) and restriction enzyme mapping confirmed molecular structure. GMCSF and TGF β expression (Protein Simple ELISA cytokine production) in CCL247 and RDES cell lines validated for performance of FDA defined cancer clinical product release assays was done. Function was determined for both electroporation (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 shaking (83%), hugging and kissing (91%), 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 per 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.

Table: 1716P

Cell Line	CCL247			RDES		
	Day 2			Day 3		
Time Point	Zap + Frozen DNA	Lipo + Frozen DNA	Lipo + Lyo DNA (5% Tre)	Zap + Frozen DNA	Lipo + Frozen DNA	Lipo + Lyo DNA (5% Tre)
GFP (Transfection efficiency)	65%	50%	70%	69%	50%	52%
GMCSF (pg/mL)	1.85 e6	3.01 e6	3.82 e6	3.95 e6	4.84 e6	5.08 e6
TGF β 1 (% Knockdown)	54%	23%	35%	59%	30%	41%

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, genitourinary, 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. Thirteen 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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