

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.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. reconstructive surgery (-90%), on-site oncology visits (-73%) and clinical research (-69%). In parallel, telemedicine visits were multiplied by 100..

Table: 1691P			
	Mean number of sessions or procedures (per week)		Variation (%)
	Period 1 (Jan-1 to Mar-15)	Period 2 (Mar-16 to Apr-19)	-
Chemotherapy	396	351	-11%
Radiotherapy	914	631	-31%
Surgery (oncological)	21	12	-43%
Surgery (onco-plastic)	8	0.8	-90%
Blood products transfusions	89	73	-18%
Inclusions in clinical trials	35	11	-69%
Visits (total)	986	546	-45%
On-site visits	983	233	-76%
Telemedicine visits	3	313	+10 333%

Conclusions: The evaluation of practice variation for cancer care is essential to understand the real impact of COVID-19 outbreak on global cancer management, so as to get prepared to further epidemic waves (for ex. implementation of telehealth innovations) or long-term consequences on cancer outcome.

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1692P SARS-CoV-2 RNA testing in cancer patients treated at a Department of Medical Oncology in Vienna, Austria

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Background: Cancer patients have been reported to be at increased for SARS-CoV-2 infection and severe course of COVID-19.

Methods: Patients routinely tested for SARS-CoV-2 RNA by nasal swab and Real-Time qPCR (RT-qPCR) between March 21st and May 4th 2020 were included. The results of this "cancer cohort" were statistically compared to the SARS-CoV-2 prevalence in the Austrian population ("control cohort") as determined by a nation-wide random sample study to define the prevalence of SARS-CoV 2 infections.

Results: 1688 SARS-CoV-2 tests were performed in 1016 consecutive cancer patients. 830/1016 (81.6%) patients were undergoing active anti-cancer treatment in a neo-adjuvant/adjuvant or palliative setting. 53/1016 (5.2%) patients self-reported symptoms potentially associated with COVID-19. SARS-Cov-2 was detected in 4/1016 (0.4%) patients. At the time of testing, all four SARS-CoV-2 positive patients were asymptomatic. 2/4 (50%) of the positive tested patients had recovered from symptomatic COVID-19. Viral clearance was achieved so far only in one of the four patients 14 days after testing positive. The three remaining patients have not achieved viral clearance after > 25 days of follow up. The estimated odds ratio of SARS-CoV-2 prevalence between the cancer cohort and the control cohort was 1.009 (95% CI 0.209-4.272; p=1).

Conclusions: Our data indicate that continuation of active anti-cancer treatment at a large department of Medical Oncology are feasible after implementation of strict population-wide and institutional safety measures. Routine SARS-CoV-2 testing of cancer patients seems advisable to detect asymptomatic virus carriers and avoid uncontrolled viral spread.

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1693P Accurate triage may be efficacious in selecting patients who could safely continue anticancer therapy during SARS-CoV-2 pandemic

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Background: During the SARS-COV-2 pandemic, cancer patients (pts) who are infected may develop severe disease if their systemic treatment is not temporarily stopped. Nasopharyngeal swab was not extensively available to screen cancer pts for SARS-COV-2 infection in northern Italy, the most area in the country most affected by the pandemic. From the beginning of the outbreak onwards, all pts admitted to the Medical Oncology Unit at Spedali Civili Hospital, Brescia, underwent a triage investigating the presence of symptoms and signs suggestive of SARS-COV-2 infection. Triage results were used to decide which pts should continue antineoplastic treatments.

Methods: All consecutive cancer pts being admitted for systemic treatment from February 24th to April 21st 2020 were considered. Triage, performed by a trained nurse, consisted of questions regarding the presence of fever, cough, dyspnea, anosmia, dysgeusia, headache, nasal congestion, conjunctival congestion, sore throat, diarrhoea, nausea and vomiting, measurement of body temperature and pulse oximetry. All enrolled pts were followed-up for overt SARS-COV-2 development until May 18th.

Results: Overall, 1180 pts were included, 54% female and median age 65 years. Most represented primary malignancies were breast (32%), gastroenteric (18%) and lung (16.5%). Thirty-one (2.5%) presented with clinically evident SARS-COV-2 disease and infection was proven by positive nasopharyngeal swab and/or radiological imaging. The triage identified 69 (6%) "grey zone" pts, with suspicious symptoms (i.e. fever 41%, cough 30%, dyspnea 19%). The nasopharyngeal swab was negative in 48% of them and was not performed in the remaining 52% of pts, as well as in all pts who were triage negative. Both SARS-COV-2 positive and "grey zone" pts did not receive treatment and were addressed to hospitalisation or home quarantine. All the 1080 pts (91.5%) who resulted negative at triage continued their antineoplastic therapy as scheduled, none of them presenting symptoms of SARS-COV-2 infection during the follow-up.

Conclusions: Accurate triage allowed safe continuation of anticancer treatment in 91.5% of pts during the SARS-COV-2 outbreak.

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1694P Discovery of circulating biomarkers in COVID-19 patients undergoing anti-IL6R immunotherapy

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Background: The severe pneumonitis in coronavirus disease 2019 (COVID-19) requires prolonged treatment in intensive care units, leading to overwhelmed hospital facilities. Treatment with tocilizumab (Actemra, Roche), a monoclonal antibody targeting interleukin 6 receptor (IL6R), has shown promising efficacy in alleviating the severe pneumonitis. However, only around 50% of the treated patients benefit from this intervention. It is therefore an unmet medical need to identify biomarkers associated with the severity of disease and theranostic biomarkers to predict and differentiate potential responders from non-responders to the treatment. Methods: An unbiased hyper reaction monitoring mass spectrometry (HRM[™]-MS) approach was used to analyze serum samples from severe COVID-19 cases before and 7 days after treatment with tocilizumab (n = 28), enabling simultaneous identification and quantification of all detectable serum proteins. All samples were measured using 1h gradient on a nano-flow LC-MS/MS setup operated in data-independent acquisition (DIA) mode. Data was extracted using Spectronaut[™] (Biognosys). Univariate and multivariate statistical analyses were conducted to identify biomarker candidates. Pathway analysis was used to identify dysregulated biological functions and signaling pathways.

Results: Over 450 proteins were quantified across all samples by HRM-MS. Univariate statistical analysis identified significantly changing proteins across conditions (mortality day 30, pre-post treatment, responder/non-responder, q-value > 0.05 and fold change >1.5). Multivariate analysis (PLS-DA) was also used to classify proteins based on their abundance across condition. Proteomic data was further integrated with clinical outcome data to identify a panel of protein biomarker candidates potentially useful in predicting tocilizumab treatment efficiency and the COVID-19 disease severity.

Conclusions: Unbiased proteomic profiling of COVID-19 patient serum identified a panel of candidate protein biomarkers that associate with tocilizumab treatment response as well as the ensuing course of the disease. Further validation of these biomarker candidates opens the way for a personalized medicine approach in treating COVID-19.

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Background: Through great efforts, the outbreak of 2019 novel corona virus disease (COVID-19) has been slowing down in Wuhan. This study was to assess the potential errors of established admission procedures from a tertiary cancer center.

Methods: A multidisciplinary team of eight frontline nurses and oncologists would conduct a failure mode and effects analysis (FMEA) to our established procedures. The FMEA consisted of 4 main steps, Including a detailed review of the on-going admission processes and the drawing of the corresponding flow chart, followed by repeated discussions of the possible errors among those processes, and then evaluation of the occurrence (O), detectability (D), and severity of impact (S) of each failure mode according to a scoring criteria (a five-point scale). Finally, the risk of errors were determined through a calculation of risk priority number (RPN=O*D*S).

Results: From March 24, 2020 to May 14, 2020, based on the established procedures, our center has screened 1,214 cancer patients in the oncology outpatient department and subsequent buffer wards. No nosocomial infection (among doctors or patients, or between patients and doctors) occurred. On the scale of RPN from high to low, ten high-risk steps were identified by FMEA, involving a failure of scheduled screening for particularly vulnerable populations, the failure of hand hygiene in outpatient and buffer wards, and the incorrect disposal of clinical waste by cleaning service staff. In addition, the psychological burden to cancer patients might increase the risk of buffer ward management failure.

Conclusions: Self-review and continuous improvement for established procedures can minimized underlying mistakes. Increasing the approaches to treatment appointments, reasonably optimizing the working during for outpatient physicians, strengthening the awareness of hand hygiene (both physicians and patients), and setting up oncological psychological counseling groups will likely improve the potential error steps.

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1696P Incidence of influenza-like illness (ILI) in cancer patients during COVID-19: The ONCOVID prospective observational study

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Background: There are limited data on cancer patients (pts) and the novel coronavirus (SARS-CoV2) respiratory disease (COVID-19). Fever and/or respiratory symptoms (influenza-like illness, ILI) is a common finding in cancer pts. We aim to evaluate the frequency of ILI in cancer pts during the pandemic, and to identify high-risk subjects to test for COVID-19.

Methods: From March 20th to April 17th 2020 we collected data of cancer pts in a prospective trial approved by the local ethics committee. The primary endpoint was to estimate the cumulative incidence of ILI in the study population. The secondary endpoint was to estimate which proportion of pts with ILI had COVID-19 diagnosis. A triage procedure with questionnaires was performed in pts accessing the hospital, with laboratory tests (complete blood count, C-reactive protein) in pts on active treatment. Non-urgent visits were converted into telehealth visits and triage: pts with symptoms were addressed to general practitioners. Based on a diagnostic algorithm, pts with ILI symptoms underwent an infectious disease specialist's evaluation and SARS-CoV2 swab. The LepuMedical SARS-CoV2 immunoassay technique was used in pts with suspect symptoms or altered laboratory tests, not falling into the diagnostic algorithm.

Results: Overall, 562 pts were enrolled: 13 (2%) pts had a positive SARS-CoV2 swab, none of which performed on the basis of triage procedures or questionnaires, rather detected through telephone communications and triage; 52 (9%) pts reported suspect symptoms and/or laboratory tests. Forty-five (8%) SARS-CoV2 swab positive, or with suspect symptoms and/or laboratory tests pts underwent SARS-CoV2 antibody (Ab) tests; 20 (3%) pts were excluded for poor clinical conditions (n=10), death (n=4), or pts' refusal (n=6). Four out of 41 (10%) suspect pts had IgG+ (n=3), or IgM+/IgG+ (n=1); 4 out of 4 COVID-19 positive pts had IgG+ (100%). Ab tests were negative in the remaining 37 pts.

Conclusions: In our experience, triage procedures and questionnaires were not helpful in detecting COVID-19 in cancer pts. The incidence of both COVID-19 diagnosis (2%), and SARS-CoV2 Ab positivity in pts tested on the basis of suspect symptoms (<1%), were similar to those observed in the general population.

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Background: Risks associated with COVID outbreak and consequent restrictive measures taken by the Government can cause concern and anxiety. The impact on cancer patients (pts) may be even greater. We investigated the influence of COVID pandemic on pts' perceptions, opinions and feelings during the peak of the epidemic and after the loosening of the Government restrictions.

Methods: Multicenter, serial cross-sectional study conducted in 11 cancer centers located in the hardest hit Italian areas. The study is composed by 2 surveys administered to unselected adult pts receiving onsite oncologic treatments: the first during the enforcement of containment measures against COVID spread; the second upon the loosening of Government restrictions. A self-administered questionnaire composed by 11 closed questions (only 1 answer) was used. At least 1000 pts per each survey were deemed necessary. Multivariable logistic regression models will be used to identify factors associated to recorded perceptions and opinions. Main outcomes are: 1) perception of the pandemic effect on feelings 2) perception of changes in the relationship with the medical team 3) opinions on healthcare reorganization