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.
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 (mor- tality 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.

Legal entity responsible for the study: Biognosys AG.

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Disclosure: J.M. Michet; F.X. Danlos; F. Pommeret; A. Marabelle: Full/Part-time employment: Biognosys AG. COVID-19. biomarker candidates opens the way for a personalized medicine approach in treating Unbiased proteomic pro

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.

Legal entity responsible for the study: Dr. Francesco Grossi, MD.

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Cancer patients’ perceptions, opinions and feelings during the COVID-19 epidemic in the most affected Italian areas: Serial cross-sectional study

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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 unlacated 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

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