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Background: Patients with thoracic malignancies may have increased risk for COVID-19 mortality. This risk may be attributable to age, comorbidities, smoking history, pulmonary disease burden and cancer-directed therapies.

Methods: TERAVOLT is a global consortium examining outcomes and assessing risk factors associated with mortality of patients with thoracic malignancies and COVID-19 infection.

Results: As of July 15, 2020, 1012 patients from 20 countries have been entered; median age was 68 with 58 % male, 80% current/former smokers, most common comorbidities of HTN (49%) & COPD (26%); 82% NSCLC, 68 % patients with stage IV disease at COVID diagnosis, 65% on treatment (38% chemotherapy, 26% immune checkpoint inhibitor (ICI), 16 % targeted tyrosine kinase inhibitor (TKI). Of these, 72% were hospitalized; 56% of patients developed complications, most frequently pneumonia (40%) and 47% who did not have prior oxygen therapy required it. 32% of patients died during their COVID-19 infection. Only 33 % of patients continued their oncology treatment after infection. Patients presenting with pneumonia (OR 2.7 2-3.5), consolidation (OR 2 CI 1,5-2,8), bilateral lung abnormalities (OR 2,8 CI 2-3,9) and pleural effusion (OR 2,7 CI 1,8-4) were at increased risk of mortality. In multivariate analysis age $\geq$ 65 (OR 1,53 CI 1,11-2,1), active smoking (OR 2 CI 1,3-3), higher stage of cancer (OR 1,9 CI 1,3-2,7), ECOG PS $\geq$2 (OR 3,7 CI 2,7-5), steroids prior to COVID diagnosis (OR 1,8 CI 1,2-2,7), were associated with increased risk of death, while chemotherapy and TKI therapy use were not and interestingly patients on immunotherapy appeared to be at decreased risk for mortality (OR 0,6 CI 0,5-0,97).

Conclusions: Facing this ongoing global pandemic, TERAVOLT is the largest thoracic malignancy database confirming the high risk for COVID-19 mortality in this specific patient group. Physicians need to evaluate the risk of mortality from COVID-19 based on age, smoking status, stage of cancer, performance status, need for steroids and specific therapy in order to determine the appropriateness for cancer therapy and tailor patient care taking into account patients' wishes and status of pandemic in the country.

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LBA76_PR Expected medium and long term impact of the COVID-19 outbreak in oncology

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Background: The ongoing SARS-CoV-2 pandemic and ensuing coronavirus disease (COVID-19) is challenging cancer care and services worldwide.

Methods: A 95 items survey was distributed worldwide by 20 oncologists from 10 of the most affected countries in order to evaluate the impact on organization of oncological care.

Results: 109 representatives from oncology centers in 18 countries (62.4% academic hospitals) filled out the survey (June 17 – July 14, 2020). A swab or gargle test is systematically performed before day care unit or overnight stay admissions in 27.5% and 58.7% of the centers, respectively. A local registry (64.2%) and systematic tracing (77.1%) of infected patients was organized in many centers. Treatment modalities mostly affected by the pandemic (cancellation/delay) were surgery (44.1%) and chemotherapy (25.7%). Earlier cessation of palliative treatment was observed in 32.1% of centers, and 64.2 % of participants agree that under-treatment is a major concern. At the pandemic peak, teleconsultations were performed for follow-up (94.5%), for oral therapy (92.7%), but also for patients receiving immunotherapy (57.8%) or chemotherapy (55%). Approximately 82% of participants estimate that they will continue to use telemedicine. Most participants reported more frequent use of virtual tumor boards (82%) and oncological team meetings (92%), but 45% disagree that virtual meetings are an acceptable alternative to live international meetings. Although 60.9% report reduced clinical activity during the pandemic peak, only 28.4% had an increased scientific activity. Only 18% of participants estimate that their well-being will not recover to previous levels by the end of the year; 63% indicate easily accessible psychological support for caregivers, but only 10% used or planned to use it. All clinical trial activities are or will soon be reactivated in 72.5% of the centers. Major study protocol violations/deviations were observed in 27.5% and significant reductions of clinical trial activities are expected by 37% of centers this year.

Conclusions: COVID-19 has a major impact on organization of patient care, well-being of caregivers, continued medical education and clinical trial activities in oncology.

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Hoffmann-La Roche; Research grant/Funding (institution): Guardanth Health; Research grant/Funding (institution): Piqur THerapeutics; Research grant/Funding (institution): Puma C; Research grant/Funding (institution): Queen Mary University of London. E.M. Ciruelos: Advisory/Consultancy, Speaker Bureau/Expert testimony, Travel/Accommodation/Expenses: Roche; Advisory/Consultancy, Speaker Bureau/Expert testimony: Lilly; Advisory/Consultancy, Speaker Bureau/Expert testimony: Novartis; Advisory/Consultancy, Speaker Bureau/Expert testimony, Travel/Accommodation/Expenses: Pfizer. H.S. 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LBA77 Anti-SARS-CoV-2 antibody response in patients with cancer and oncology healthcare workers: A multicenter, prospective study

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Background: Poor outcomes for patients with cancer and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-related disease (COVID-19) have been reported so far. Although anti-SARS-CoV-2 IgG response is usually detectable within three weeks after infection, limited information on the seroconversion rate of patients with cancer infected by SARS-CoV-2 is available.

Methods: This is a multicenter, observational, prospective study that included patients and oncology healthcare workers (HCWs) with SARS-CoV-2 infection confirmed by RT-PCR or clinical/radiological suspicious of infection as well as patients with cancer who are considered at high risk for infection. All subjects were tested with the 2019-nCoV IgG/IgM Rapid Test Cassett for the fast detection of IgG and IgM antibodies against SARS-CoV-2. The aim of the study was to evaluate anti-SARS-CoV-2 seroconversion rates by qualitative assay in patients with cancer and HCWs with confirmed or clinically suspected COVID-19.

Results: At first interim analysis, 166 subjects were enrolled in the study. Cancer patients and HCWs were 61 (36.7%) and 105 (63.3%), respectively. HCWs were younger than patients with cancer (median age 41 vs 62 years; $P<0.001$). Eighty-six subjects (51.8%) had confirmed SARS-CoV-2 diagnosis by RT-PCR testing on nasopharyngeal swab specimen, while forty-nine (29.5%) had a clinical suspicious of COVID-19 in absence of RT-PCR confirmation. In patients with RT-PCR-confirmed SARS-CoV-2 infection, 62 (83.8%) were IgG-positive. Neither differences in terms of IgG positivity (87.9% vs 80.5%; $P=0.39$) nor in median time from COVID-19 diagnosis to IgG detection (23.0 vs 28.0 days; $P=0.21$) were found between patients with cancer and HCWs.

Conclusions: Our data show that SARS-CoV-2-specific IgG antibody response is not different between cancer patients and healthy subjects. Qualitative rapid test for antibody detection represents an useful support to RNA RT-PCR testing for the diagnosis of COVID-19 in high-risk populations, including patients with cancer.

Legal entity responsible for the study: Istituto Europeo di Oncologia IRCCS.

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