

Higher risk of death in cancer patients with COVID-19 may be due to advanced age and more pre-existing conditions

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New research presented at this week's ESCMID Conference on Coronavirus Diseases (ECCVID, online 23-25 September) suggests that the poor outcomes and higher death rates in cancer patients with COVID-19 could be due to them generally being older and having more underlying conditions, rather than due to the cancer itself. The study is by Dr. Maria Rüttrich, Jena University Hospital, Germany, and colleagues.

In their study, the authors used data from the LEOSS (Lean European Open Survey for SARS-CoV-2 Infected Patients) Registry. The German Society of Infectious Diseases (DGI) created this registry aiming to provide scientists and doctors with reliable clinical data to enable them to answer numerous urgent questions, such as when do COVID-19 patients develop [severe symptoms](#)—what is the best possible treatment—or which measures have been successful up to now? Under the new initiative, all the collected data will be available to the [scientific community](#) for use in crowd-based analyses.

The authors retrospectively analysed a cohort of 435 patients with [cancer](#) and COVID-19 from a total of 3071 patients enrolled between March and August 2020. Baseline characteristics include socio-demographics, comorbidity according to Charlson Comorbidity Index (a measurement of number of underlying conditions) (CCI), ECOG score (measure of functional status in cancer patients) and outcome of COVID-19.

Clinical manifestation of COVID-19 was described in four phases: uncomplicated (asymptomatic/mild symptoms), complicated (need for oxygen supplementation), critical (need for life supporting therapy) and recovery (improvement/ discharge).

The median observational period was 14 days, and the median duration of hospitalisation 15 days. The most common age category was 76—85 (36.5%), 176 (41%) pts were female. Mean CCI was 4.65, and 44/187 (23.5%) pts had an ECOG of over 2, indicating cancer patients who are capable of limited self-care and confined to bed or chair for more than 50% of the day. Solid tumors were seen in 59% of patients, and lymphoma and leukemia in 18% and 11%, respectively.

A total of 193 patients (54%) had an active malignant disease and 96 (22%) had received anti-cancer treatment within the last 3 months before testing positive for SARS-CoV-2. At detection of SARS-CoV-2, 272 (63%) pts were in an uncomplicated phase of COVID-19 disease. Progression to complicated/ critical phases of COVID-19 was seen in 206 (55%) pts, while 119 (28%) pts received critical care. A total of 78 of these 119 pts (66%) needed mechanical ventilation. COVID-19 mortality rate was 23%, while men were twice as likely to die as women (28% vs 14%). Additionally, active cancer disease (e.g. recurrent or metastatic cancer, pts receiving anti-cancer therapy) was associated with a higher mortality attributed to COVID-19 than in patients without active cancer disease (27% vs 17%)

Compared with non-cancer patients, the distribution of age and comorbidity differ significantly. Thus, patients without cancer were younger (most frequent age category 56—65) and had less comorbidity (CCI 1.12 vs 1.59). Survival at 30 days was worse in cancer patients (70%) versus those without cancer (77%), and mortality rate higher (23% vs 14%). However, after adjustments for age, sex and comorbidity, survival and mortality attributed to COVID-19 were

comparable to non-cancer patients.

Dr. Rüttrich concludes: "Even though survival and COVID-19 mortality of both groups appeared to be comparable, after adjusting for age, sex and comorbidity, our results show that cancer patients are at higher risk of more serious [disease](#) and death due to being generally older than non-[cancer patients](#) with COVID-19, and also having more underlying conditions. It does not appear to be the cancer itself that is leading to these poor outcomes."

Provided by European Society of Clinical Microbiology and Infectious Diseases

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