Background and importance:
Literature describes similar mortality in the general COVID-19 patients and those receiving cancer therapies. However, cancer treatments are a heterogeneous group.

Aim and objectives:
To evaluate how different cancer treatments can affect to COVID-19 mortality in patients requiring hospital admission.

Materials and methods:
Retrospective observational analysis conducted from March 2020 to February 2021 in a tertiary hospital.

Data recorded:
- Bio-demographic data (sex, age)
- Clinical data (type of cancer, ECOG, comorbidities)

All adult oncologic patients admitted for COVID-19, who had received anticancer drugs at least 6 weeks prior to hospital admission, were included.

Results:
Out of 5,633 cancer patients treated at our center, 108 (1.9%) met the inclusion criteria and were included.

- 59 (54.6%) were men, median age 64 years (21-96), 50 (46.3%) had ECOG 0 or 1.

- Half of patients with lymphoid neoplasms (n = 22, 20.3%) received chemotherapy (13; 59.1%) or immunotherapy (11; 50%).

- Of 20 (18.5%) patients with gastrointestinal, 13 (12.0%) with lung and 12 (11.1%) with head and neck cancer, respectively 14 (70%), 9 (69.2%) and 10 (83.3%) had received chemotherapy.

- Morality rate for all patients admitted to hospital with moderate-severe COVID was 10.4%, while patients included in our study had higher mortality (n=38; 35.1%).

- Higher mortality was associated with immunotherapy (40.6 %) and targeted-therapy (43.4%). Chemotherapy was less related with mortality (28.5%).

- Anti-CD20 was the mechanism of action most related with mortality (n=10; mortality: 60%).

Conclusion and relevance:
Although some evidence suggests that recent exposure to systemic anticancer therapy does not increase COVID-19 mortality, our results show that in subgroup of moderate-severe hospitalized patients, cancer treatment does increase COVID-19 mortality.

Immunotherapy and targeted-therapy could be more related to higher mortality rates than chemotherapy group. Specifically, anti-CD20 have significantly higher mortality than other drugs.