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 **Spotlight on Special Topics**

TIME SINCE LAST CHEMOTHERAPY AND COVID-19 OUTCOMES IN CARDIO-ONCOLOGY INPATIENTS

Poster Contributions

For exact presentation time, refer to the online ACC.22 Program Planner at <https://www.abstractsonline.com/pp8/#!/10461>

Session Title: Spotlight on Special Topics Flatboard Poster Selections: Cardio-Oncology

Abstract Category: 57. Spotlight on Special Topics: Cardio-oncology

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Background: Chemotherapy may compromise a patient’s immune system and increase risk of COVID-19 infection severity. We sought to determine whether clinical outcomes in cardio-oncology COVID-19 inpatients were different by time since chemotherapy.

Methods: This was a retrospective cohort study of the National COVID Cohort Collaborative (N3C). We identified patients with active cancer (i.e., those who received cytotoxic, immunotherapy, endocrine, or targeted chemotherapy within 30 days of admission for PCR-confirmed COVID-19 infection) and CVD. We used logistic regression to estimate the adjusted odds of outcomes in cardio-oncology inpatients by time since chemotherapy (<14, ≥14 days prior to admission).

Results: Our cohort included 1,794 cardio-onc inpatients (mean [SD] age: 66 [16]; 53% female; 25% had chemotherapy within 7 days, 50% within 14 days). Cardio-onc COVID-19 patients with recent chemotherapy (<14 days) had similar demographics and length of stay (0.94 days longer, p=0.87) to those who had chemotherapy ≥14 days. There was no significant increase in odds of acute CVD events, mechanical ventilatory support, or 30-day mortality with more recent chemotherapy (Table).

Conclusion: Consistent with smaller observational studies in cancer patients, time since chemotherapy was not associated with COVID-19 outcomes in cardio-onc inpatients. Further studies assessing effects within class of chemotherapy and comparing longer time intervals are warranted.

| Table 1. Association between Time Since Chemotherapy and Outcomes in Cardio-oncology Inpatients (N=1,794) | | |
|---|--|--|
| Outcome | Unadjusted OR (95% CI) | Adjusted OR (95% CI) |
| Reference (Chemotherapy ≥14 days prior to admission, N=899) | Chemotherapy < 14 prior to admission (N=895) | Chemotherapy < 14 prior to admission (N=895) |
| 30-day mortality | 1.03 (0.81, 1.29) | 1.03 (0.80, 1.31) |
| Myocardial Infarction | 1.01 (0.75, 1.37) | 1.06 (0.77, 1.45) |
| Heart Failure | 0.96 (0.74, 1.24) | 0.95 (0.72, 1.25) |
| Stroke | 1.29 (0.91, 1.83) | 1.34 (0.93, 1.92) |
| Mechanical Ventilatory Support | 0.88 (0.70, 1.09) | 0.85 (0.67, 1.08) |
| Adjusted odds ratios (OR) adjusted for age, sex, and comorbidities (alcohol abuse, asthma, diabetes, hypertension, atrial fibrillation, chronic kidney disease, COPD, peripheral vascular disease, dyslipidemia). CVD defined as ischemic heart disease, valvular heart disease, heart failure, prior cardiac surgery via SNOMED codes. | | |