A retrospective review of outcomes in elderly patients receiving chemotherapy and immunotherapy at LMH Health

Purpose (100 max):
Cancer is strongly associated with increasing age. As life expectancy continues to increase, studies that specifically acknowledge the care of elderly cancer patients is warranted. Due to older age, some patients are subject to over or under treatment of their malignancies. Evidence-based decisions are often made by oncologists derived from studies that primarily include patients less than 65 years old and elderly patients are under-represented in clinical trials. The purpose of this study was to evaluate the outcomes in elderly cancer patients who received chemotherapy or immunotherapy at a community-based outpatient hematology/oncology center.

Methods (225 max):
A retrospective analysis was performed of 98 patients who were 65 years or older, had a cancer diagnosis, and were newly initiated on either chemotherapy and/or immunotherapy between June 1st, 2019 through March 31st, 2020 at LMH Health Hematology/Oncology Center. Descriptive statistics were used to determine primary outcomes. As the primary outcome, patients who required dose modifications, had a discontinuation of therapy, or a delay in therapy were collected. Survival analysis was used to determine secondary outcomes. The Kaplan-Meier method was used to derive time-to-event estimates and test for significance. Two sub-groups for Kaplan-Meier analysis included age and gender (male or female). For age, patients in Group 1 included patients 65-74 years of age, and Group 2 included patients 75 and older. Time-to-event estimates included time to progression, time to progression or death, and time to death.

Results (200 max):
In our study, there were 98 patients with a total of 117 new treatment initiations. Of the 117 new treatment initiations, there were 30 (25.6%) delays in therapy, 17 (14.5%) dose modifications, and 32 (27.4%) discontinuations in therapy. Seventy-nine of the new treatment initiations (67.5%) required either a delay, dose modification, or discontinuation of therapy. The median age in this analysis was 75 years and the age range was 65-96 years. The most common reason for any modification in therapy were due to patient intolerance (n=9), lab abnormalities such as neutropenia or thrombocytopenia (n=15), treatment-specific reactions (n=13), and infection (n=10). For secondary outcomes, a total of 41 (41.8%) patients had documented emergency department visits and 30 (30.6%) patients had documented hospitalization at LMH or an outside hospital related to chemotherapy. Among the survival analysis performed for age and gender, it was found that there was no statistically significant difference between the two groups. Among all patients included in time-to-event analysis, the mean estimate for time to death was 11.5 months and the median time to death was 15.9 months. Out of the 98 patients, 35 patients were documented deceased in the EMR (electronic medical record).

Conclusion (100 max):
In this analysis, the majority of patients evaluated required modification in their newly initiated chemotherapy or immunotherapy due to adverse events. This study suggests a screening tool could be valuable to prevent adverse events and ultimately improve patient care in this vulnerable population. Determining if a patient is fit or frail prior to initiation of therapy has the

potential to prevent hospitalizations. A prospective stuidy that compares outcomes between patients with and without a screening tool would be of benefit.