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POSTER ABSTRACTS

905.OUTCOMES RESEARCH-LYMPHOID MALIGNANCIES

Inequities in Autologous Stem Cell Transplantation, Chimeric Antigen Receptor T-Cell Therapy and Clinical Trial Participation in Patients Receiving Second-Line and Later Multiple Myeloma Treatment

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Introduction: Despite improvements in care and novel therapies for the treatment of multiple myeloma (MM), nearly all patients experience relapse. However, few real-world studies have focused on treatment inequities that occur later in the MM patient journey with subsequent lines of therapy - the setting of particular interest for salvage treatment and novel drug development.

The objectives of this study were to measure receipt of autologous stem cell transplantation (ASCT), chimeric antigen receptor T-cell therapy (CAR-T) and participation in clinical trials following initiation of second-line (2L) MM treatment and to describe inequities by race/ethnicity and area-level sociodemographic factors.

Methods: This was a retrospective cohort study using the nationwide, electronic health record-derived Flatiron Health de-identified database. We included patients that previously received therapy for newly diagnosed MM and were initiating 2L between 2011 and 2023. The exposures of interest were race/ethnicity and area-level (census block group) socioeconomic status (SES) measured by the Yost index. Outcomes of interest were receipt of ASCT, CAR-T and clinical trial participation. Patients were followed from the date of 2L initiation until the first of the outcome of interest, death or end of the study period. Multivariable cause-specific hazards models were used to estimate hazard ratios (HR) and 95% confidence intervals (CI) for associations with receipt of ASCT, CAR-T and clinical trial participation separately and as a single outcome. Informed by the Institute of Medicine's framework for healthcare disparities, models were adjusted for clinical factors, specifically, age, sex, and Eastern Cooperative Oncology Group (ECOG) performance status.

Results: In a cohort of 2,017 patients with MM that were ASCT and CAR-T naïve with a median age of 72 years (interquartile range [IQR] 63-79), 52% were male, 52% had ECOG scores of 0 or 1, and 59% were treated in community oncology practices. Prior to 2L, 73% received fluorescence in situ hybridization testing for cytogenetic abnormalities and most patients received either doublet (34%) or triplet (51%) therapy.

The majority of patients included were non-Latinx (NL)-White (61%), 21% were NL-Black and 4% were Latinx. Compared to NL-White patients, fewer NL-Black patients received FISH testing (70% versus 73%) and either doublet or triplet therapy (81% versus 86%) for newly diagnosed MM. A higher proportion of Black and Latinx patients resided in areas in the lowest quintile of SES (42% and 40% respectively) compared to NL-White patients (8%).

Overall, 12.7% received ASCT, 0.8% received CAR-T and 1.3% participated in a clinical trial following the start of 2L. Compared with NL-White patients, Black and Latinx patients had lower rates of treatment with ASCT and CAR-T; and clinical trial participation was also lower among Latinx patients relative to NL-White patients (see **Figure**). Patients living in the highest quintile of SES had higher rates of ASCT (19.2%), CAR-T (0.8%) and clinical trial participation (2.3%) compared to those living in the lowest quintile of SES (10.1%, 0.3% and 1.5% respectively). In multivariable models, NL-Black (HR 0.57, 95% CI 0.42-0.76) and Latinx (HR 0.41, 95% CI 0.25-0.76) patients had a lower likelihood of receiving these treatments or participating in a clinical trial compared to NL-White patients; similarly, living in the lowest SES quintile (HR 0.38, 95% CI 0.26-0.56) was also associated with lower likelihood of these outcomes. Other area-level factors associated with inequities in ASCT, CAR-T and trial participation included living in segregated Black neighborhoods and areas with greater concentration of non-citizen residence and no vehicle ownership.

Conclusion: We observed lower receipt of ASCT, CAR-T, and participation in clinical trials among Black and Latinx patients initiating 2L or later MM therapy, as well as patients living in areas of low SES. Persistent inequities in MM span the entirety

of the patient journey, including the limited uptake and availability of novel therapies at later stages of the disease and a lack of representation in trials investigating new MM therapies.

Disclosures Pierre: *Roche:* Current equity holder in publicly-traded company; *Pfizer:* Consultancy; *BMS:* Consultancy; *Flatiron Health:* Current Employment. **Calip:** *Roche:* Current equity holder in publicly-traded company; *Flatiron Health:* Current Employment. **Ho:** *Roche:* Current equity holder in publicly-traded company; *Flatiron Health, Inc:* Current Employment. **Ghanim:** *Roche:* Current equity holder in publicly-traded company; *Flatiron Health:* Current Employment; *Abbvie:* Ended employment in the past 24 months. **Lu:** *Flatiron Health:* Current Employment; *Roche:* Current equity holder in publicly-traded company. **Ryals:** *Roche:* Current equity holder in publicly-traded company; *Flatiron Health:* Current Employment. **Guadamuz:** *Roche:* Current equity holder in publicly-traded company; *Flatiron Health:* Current Employment, Ended employment in the past 24 months.

Figure. Cumulative incidence of ASCT, CAR-T and clinical trial participation by race/ethnicity and area-level SES

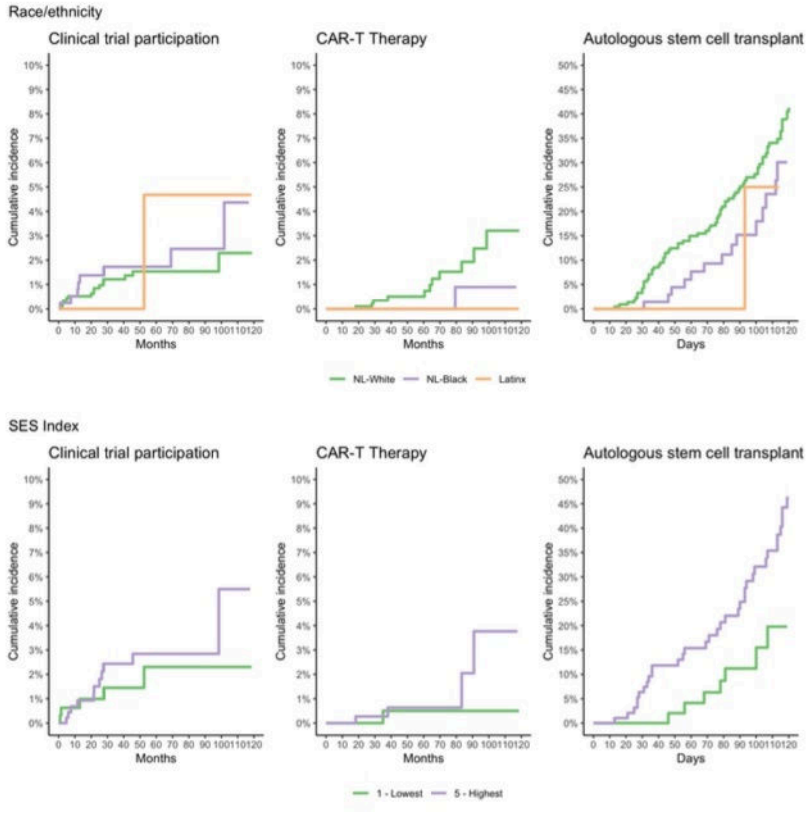

Figure 1

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