The changing spectrum of infection with BCMA and GPRC5D targeting bispecific antibody (bsAb) therapy in patients with relapsed refractory multiple myeloma

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Supplementary data:

Treatment

Patients received bsAb therapy according to the study protocol. CRS and ICANS were graded according to the American Society for Transplantation and Cellular Therapy consensus.

Management of CRS and ICANS were done according to specific clinical trial protocol.

Qualitative variables and statistical methods

Demographic and baseline clinical characteristics were summarized as counts with percentages for categorical measures, and median with range for continuous ones. Between-group comparisons of categorical variables were performed using chi-squared test, or Fisher's exact test if any expected cell counts were below 5. Wilcoxon's rank-sum test and Kruskal-Wallis test was used to compare ordinal and continuous measurements between two or multiple groups, respectively.

Descriptive statistics of infection characteristics were computed similarly, but survey-adjusted versions of tests were used to account for the correlation between multiple infections within the same patient. The person-level infection burden was summarized as the number of infections per 100 days at risk to account for varying follow-up. Quasi-Poisson regression with log-transformed number of days-at-risk as offset was used for between-group comparisons.

The cumulative incidence of the first occurrence of an infection with treatment discontinuation / death as competing risk was estimated using the Aalen-Johansen estimator and compared between groups using Gray's test. A day-level Cox proportional cause-specific hazards regression model was fitted to assess risk factors of infection. Evaluated covariates included demographics, disease characteristics at the start of first bsAb treatment, and the cumulative number of prior infections. The multivariable model was selected using AIC-guided backward selection, starting from the model that included all covariates included in the univariate analysis. The primary predictor of interest, bsAb type, was included in the model regardless of its effect on the AIC.