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Clinical Concerns and Functional Changes In Adults With Hematologic Malignancies Undergoing CAR T-cell Therapy

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Chimeric antigen receptor T-cell therapy (CART), used to treat hematologic malignancies, including multiple myeloma (MM) and diffuse large cell B lymphoma (DLBCL), offers a chance of lasting remission for relapsed and refractory disease. Unfortunately, symptom burden can be high and impact clinical outcomes and functionality, leading to impaired patient quality of life. **PURPOSE:** Assess longitudinal clinical concerns and functional changes in adults diagnosed with DLBCL or MM scheduled for CART. Addressing these issues will help determine appropriate supportive care modalities. **METHODS:** Participants were recruited from UPMC Hillman Cancer Center in Pittsburgh, PA and were assessed before infusion, post-infusion discharge, +30 days after CART, and +90 days after CART. **RESULTS:** Twenty-five patients enrolled–75% male, 71% DLBCL, and an average age of 67 years. CART candidates had an average of 12.8 days (6-48 days) from enrollment to CART admission and spent approximately 12.21 days inpatient following infusion (6-27 days). "Improving Physical Strength"was a top three concern amongst 76% of patients; yet only 36% of patients reported discussions on exercise with their healthcare team and 27% were referred to exercise services prior to CART. For the six-minute walk test, 94% of participants failed to walk 400 meters, a prognostic marker for non-relapse mortality and overall survival. For the 30-second chair stand test, 71% of men and 29% of women were categorized as a fall risk based on age- and sex-matched scores for adults 65 –69 years. For the SPPB, participants averaged a score of 9.23 –9.60 from baseline to 90-days post-CART, below the risk score of 10, indicating an increased risk of all-cause mortality. **CONCLUSION:** Although patients demonstrated natural functional recovery, there are numerous outstanding clinical, functional, and patient-centered concerns that remain to be explored. More research is needed to determine the role of exercise throughout the CART journey.

Keywords

CAR T-cell therapy, physical function, hematologic malignancies

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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