

Abstract: PB2961

Title: INCIDENCE OF SECOND PRIMARY MALIGNANCIES (SPM) FOLLOWING CHIMERIC ANTIGEN RECEPTOR T-CELL THERAPY (CAR-T)

Abstract Type: Publication Only

Topic: Aggressive Non-Hodgkin lymphoma - Clinical

Background:

CAR-T has revolutionized the management of relapsed/refractory (R/R) B-ALL, B-cell lymphomas, and multiple myeloma (MM). However, there is a paucity of data on second primary malignancy (SPM) following CAR-T. Hence, we sought to evaluate the incidence of SPM in patients (pts) receiving CAR-T for B-cell lymphoma and MM.

Aims:

To investigate the incidence of SPM in patients receiving CART therapy.

Methods:

Adult pts with R/R B-cell lymphomas and MM who received commercially available CAR-T at OSU between Jan 1, 2016 and Sept 1, 2022 were included in the study. A minimum of 2 year follow up post CAR-T was mandated.

Results:

Among 246 pts who received CAR-T (228 for R/R lymphoma, 18 for R/R MM), 21 developed SPM (8.5%). Characteristics of pts who developed SPM are shown in Table 1. 19/21 pts (90%) received CAR-T for aggressive lymphoma, 2/21 (10%) for MM. The most common CAR-T product was axi-cel (57%). Other products included tisa-cel (19%), brexu-cel (10%), ide-cel (10%) and liso-cel (4%). 11 pts (52%) developed skin cancer with 8 (38%) squamous cell carcinoma, 2 (9%) basal cell carcinoma, and 1 (4%) undifferentiated skin cancer. 7 pts (33%) developed hematological malignancies with 4 (19%) MDS, 2 (9%) AML, and 1 (4%) plasmacytoma. 3 pts (14%) developed solid tumors with 1 (4%) bladder cancer, 1 (4%) prostate cancer, and 1 (4%) breast cancer.

Summary/Conclusion:

In this cohort of pts that underwent CAR-T treatment for R/R aggressive lymphoma and MM, 8.5% developed SPM. A large proportion developed skin cancer, a smaller number had hematological malignancies (predominantly myeloid) and a minority had new solid tumors at 2 years post CART follow up. Larger studies are needed to determine the predictive factors that could provide insight into the development of SPMs in pts undergoing CAR-T.

Table 1: Characteristics of Pts

	N=21 (%)
Median age at CART in yrs, range	66 (28-76)
Sex	
F	7 (33)
M	14 (67)
Disease type	
Ritcher's syndrome	2 (9)
Large B-cell lymphoma	15 (71)
Mantle cell lymphoma	2 (9)
Multiple myeloma	2 (9)
Median Lines of therapy pre-CART, range	4 (2-23)

Keywords: Multiple myeloma, CAR-T