Disparities Associated With CAR-T Therapy Access for Multiple Myeloma Patients

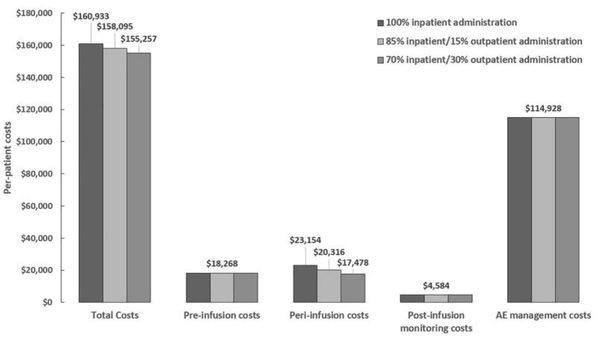
Jaysón Davidson
Jdavidson@ucsf.edu

BACKGROUND:

- **Multiple myeloma (MM)** is a cancer that forms in white blood cells and is the second most common hematologic malignancy in the U.S
- **Black patients** are diagnosed at twice the rate of White patients, diagnosed, on average, 5-10 years earlier and are also known to have more associated risk factors for higher-risk myeloma-related complications.
- Despite recent breakthroughs in treatment goals, the treatment options for patients with **MM remain limited and ineffective**.
- One promising approach is the use of **CAR T-cells**, which are engineered T cells equipped with lymphocyte-like signaling molecules.
- **CAR T-cell therapy** requires access to a limited number of academic centers with expertise in CAR-T management and related toxicities

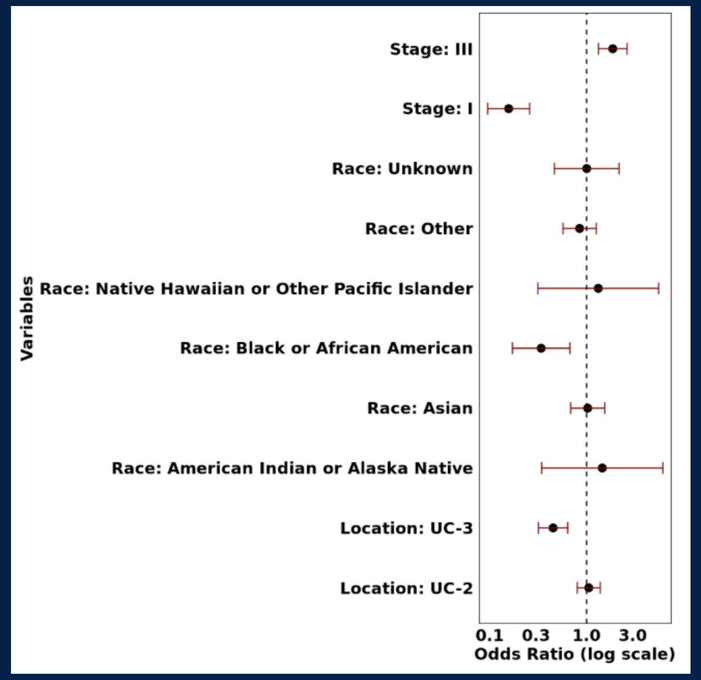
QUESTION: Can electronic health record data reveal disparities underlying **CAR T-cell therapy** access for **Multiple Myeloma** patients?

CAR T-cell therapies are expensive and limited



Jagannath S, Joseph N, Crivera C, et al. Component Costs of CAR-T Therapy in Addition to Treatment Acquisition Costs in Patients with Multiple Myeloma. Oncol Ther. 2023;11(2):263-275. doi:10.1007/s40487-023-00228-5

Black patients are less likely to receive CAR-T therapy when compared to White patients



Did a MM Patient Receive CAR-T cell therapy?

	No	Yes	Total
	(N=19326)	(N=298)	(N=19624)
International Staging System			
Stage I	6645 (34.4%)	17 (5.7%)	6662 (33.9%)
Stage II	11370 (58.8%)	228 (76.5%)	11598 (59.1%)
Stage III	1288 (6.7%)	51 (17.1%)	1339 (6.8%)
Unknown Stage	23 (0.1%)	<10 (<10%)	25 (0.1%)
UC - Location			
UC-1	6177 (32.0%)	134 (45.0%)	6311 (32.2%)
UC-2	5388 (27.9%)	113 (37.9%)	5501 (28.0%)
UC-3	7761 (40.2%)	51 (17.1%)	7812 (39.8%)
Race			
American Indian or Alaska Native	70 (0.4%)	<10 (<10%)	72 (0.4%)
Asian	1641 (8.5%)	29 (9.7%)	1670 (8.5%)
Black or African American	1516 (7.8%)	<10 (<10%)	1525 (7.8%)
Native Hawaiian or Other Pacific Islander	82 (0.4%)	<10 (<10%)	84 (0.4%)
Other Race	2709 (14.0%)	64 (21.5%)	2773 (14.1%)
Unknown	1597 (8.3%)	<10 (<10%)	1606 (8.2%)
White	11711 (60.6%)	183 (61.4%)	11894 (60.6%)

Take a picture to connect via business card

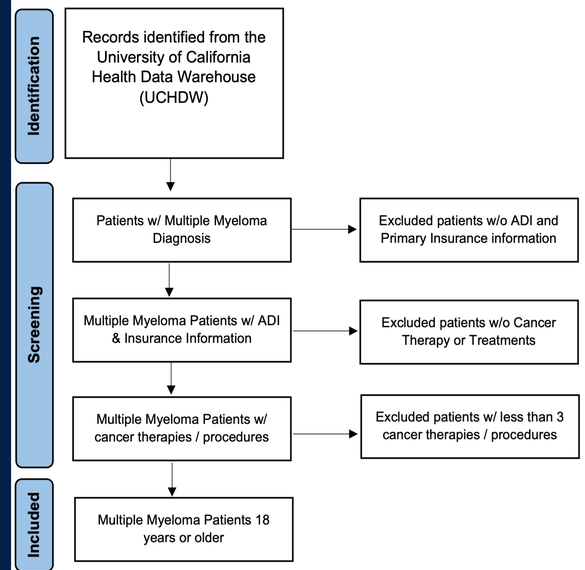
UCSF Bakar Computational Health Sciences Institute

Poster Code: RWD92

METHODS:

- De-identified data from the multi-institutional University of California Health Data Warehouse (UCHDW) were extracted to finalize cohort.
- **MM** disease severity was determined by the International Staging System (ISS) for Multiple Myeloma.
- Logistic Regression to assess the association of race, UC-location, and disease severity on **CAR T-cell therapy** access.

University of California Data Warehouse **Cohort Selection** Criteria



RESULTS:

- We identified 19,624 patients treated for **MM** from three University of California academic health centers, 298 of which received **CAR-T cell therapy**.
- UC -Location, disease severity, and Race was found to be a strong determinants of CAR-T access ($p < 0.001$, χ^2 test).
- Patients who identified as Black / AA (OR = 0.34) or Other Race (OR = 0.85) were less likely to receive **CAR-T cell therapy** when compared to White patients.

Jaysón Davidson, Travis Zack, Irene Y. Chen, Atul J. Butte