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# WHAT COMES NEXT AFTER IMMUNE THERAPY IN MULTIPLE MYELOMA? REAL-WORLD SEQUENCING AFTER CAR-T AND BISPECIFIC ANTIBODIES

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## Background

Chimeric antigen receptor T-cell therapy (CAR-T) and bispecific antibodies (BsAb) have expanded treatment options for relapsed/refractory multiple myeloma (MM), but real-world treatment sequencing following these immune therapies remains poorly characterized.

## Purpose

To describe treatment sequencing after CAR-T and BsAb and evaluate time to next line of therapy (TTNT) in patients with MM.

## Methods

We conducted a retrospective cohort study using the HealthTree Registry, an EHR-derived database of patients with MM. Immune therapy exposures were classified as CAR-T or BsAb. Analyses were performed across all qualifying immune-therapy lines and in a patient-level index cohort defined by the first observed immune therapy per patient. TTNT was defined as time from immune therapy initiation to next line-of-therapy start.

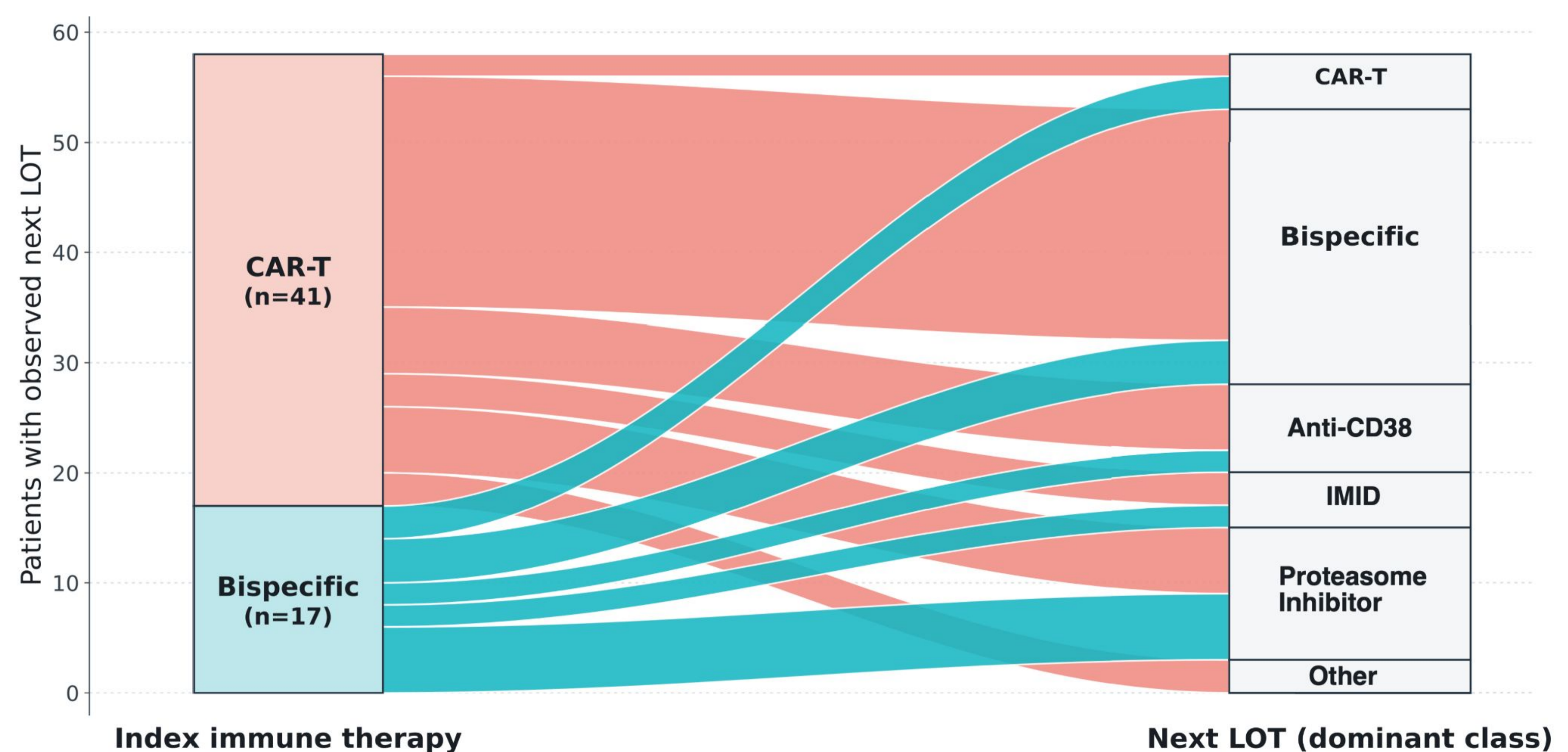
## Results

We identified 206 patients contributing 262 immune-therapy exposures (151 CAR-T and 111 BsAb). In the index cohort, 141 patients received CAR-T and 65 received BsAb. CAR-T exposure was dominated by ciltacabtagene autoleucl (62%) and idecabtagene vicleucl (25%), while BsAb exposure was primarily teclistamab (65%) and talquetamab (23%). A subsequent line of therapy was observed in 29% of CAR-T and 26% of BsAb patients. Among those with documented sequencing, BsAb was the most common therapy following CAR-T (46% in LOT1–4 and 62% in LOT≥5). In contrast, proteasome inhibitor–containing regimens were most frequently used after BsAb (42%). Early next-line initiation occurred more frequently after BsAb than CAR-T (≤90 days: 41% vs 7%; ≤180 days: 59% vs 24%). On this analysis overall TTNT did not differ significantly between groups.

**Table 1. Distribution of Therapies After Immunotherapy type, per Line of Therapy Group**

Initial Treatment	Line of therapy	Next LOT	N Patients	Subgroup %
CAR-T	1-4	Talquetamab	4	31
CAR-T	1-4	Non-immune/Other	3	23
CAR-T	1-4	Ciltacabtagene Autoleucl	2	15
CAR-T	1-4	Elranatamab	2	15
CAR-T	1-4	Teclistamab	2	15
CAR-T	5	Non-immune/Other	15	53
CAR-T	5	Teclistamab	8	29
CAR-T	5	Talquetamab	3	11
CAR-T	5	Cevostamab	2	7
Bispecific	1-4	Non-immune/Other	2	40
Bispecific	1-4	Idecabtagene Vicleucl	1	20
Bispecific	1-4	Talquetamab	1	20
Bispecific	1-4	Teclistamab	1	20
Bispecific	5	Non-immune/Other	8	67
Bispecific	5	Ciltacabtagene Autoleucl	2	17
Bispecific	5	Elranatamab	1	8
Bispecific	5	Talquetamab	1	8

**Figure 1. Therapy Sequencing after CAR-T and Bispecific therapies in Multiple Myeloma**



## Conclusions

Distinct sequencing patterns are emerging following immune therapies in MM. CAR-T is frequently followed by BsAb, whereas BsAb is more often followed by proteasome inhibitor–based therapy and earlier transition to subsequent treatment. These findings provide real-world insight into evolving treatment pathways after immune therapies and may inform sequencing strategies as these agents move earlier in the MM treatment paradigm.

