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Real-World Treatment Utilization, Sequencing Patterns, and Healthcare Resource Utilization in Waldenström Macroglobulinemia (WM)

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Background:

WM is a rare, incurable non-Hodgkin lymphoma with diverse treatment options. Given limited real-world evidence on current treatment utilization and sequencing, this study examined real-world treatment patterns and healthcare resource utilization (HCRU) in WM patients in the US.

Methods:

This retrospective observational study used the US Symphony Integrated Dataverse® database to identify adults with ≥1 WM diagnostic codes who initiated treatment between 01/2020-08/2025. Regimens included bendamustine-based chemotherapy, rituximab monotherapy, rituximab combination therapy (including R-CHOP and other combinations), Bruton tyrosine kinase inhibitor (BTKi; including zanubrutinib and ibrutinib), bortezomib-, lenalidomide-, venetoclax-based, and other regimens. Treatment utilization patterns were examined overall, by year, and by line of therapy (LOT), with sequence patterns visualized via Sankey diagrams. Patient clinical and sociodemographic characteristics were assessed. All-cause HCRU during treatment, including inpatient, outpatient, and other medical/hospital services, was examined and reported per patient per year (PPPY).

Results:

A total of 7583 WM patients initiated first line (1L), 2251 initiated second line (2L), and 976 initiated third and more lines (3L+) of therapies. BTKi were the most common regimen across all LOTs, followed by bendamustine and rituximab monotherapy (Table). Zanubrutinib was the most frequently used BTKi with increasing use over time. After 1L BTKi, bendamustine was the most common next line of therapy (42.7% after 1L zanubrutinib,

22.2% after 1L ibrutinib). After 1L bendamustine, BTKi use was most common (35.6% for 2L zanubrutinib, 16.4% for 2L ibrutinib). Following 2L zanubrutinib, bendamustine was used in 33% and venetoclax was used in 30% of patients. After 2L ibrutinib, 50% were re-treated with a BTKi (zanubrutinib, 34.6%; ibrutinib, 15.4%) while 13.5% received bendamustine and 9.6% bortezomib. Substantial HCRU was observed across LOTs. Mean outpatient visit PPPY in zanubrutinib was 12 in 1L, 13.6 in 2L, and 13.2 in 3L+, and in bendamustine 33.7-37 across 1L-3L+.

Conclusions:

Our findings provide real-world insights into the current WM treatment landscape. While BTKi were the most commonly used regimen across all LOT, treatment sequencing frequently involved transitions between BTKi- and bendamustine-based regimens, reflecting evolving real-world practice patterns. HCRU was substantial across LOT and varied by regimen. Future studies evaluating long-term outcomes of emerging treatment strategies are warranted.

Table: Treatment Utilization Pattern (%)

Regimen	1L	2L	3L+
BTKi	36.5	37.0	35.7
Bendamustine	27.1	18.4	14.0
Rituximab monotherapy	22.3	19.9	20.3
Rituximab combination	5.2	8.1	8.9
Bortezomib	3.9	5.6	5.6
Lenalidomide	1.4	2.9	4.2
Venetoclax	1.0	4.4	5.1
Other	2.7	3.7	6.1