

Real-world burden of disease (BoD), treatment (tx) patterns, and outcomes in patients with mantle cell lymphoma (MCL)

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ABSTRACT

Background: While newer targeted therapies have revolutionized treatment paradigms in MCL, real-world evidence characterizing tx patterns is limited. This study aimed to examine BoD, tx utilization, and outcomes in real-world MCL patients by year and lines (L) of therapy (LOT) in the US.

Methods: A retrospective, observational study was conducted using Symphony Integrated Dataverse® to identify adult patients with MCL who initiated tx from 2019 to 2024. Tx regimens were categorized into 7 mutually exclusive groups: bendamustine-based chemotherapy (B-based), rituximab, cyclophosphamide, doxorubicin hydrochloride, vincristine sulfate, and prednisone (R-CHOP), rituximab monotherapy (R-mono), Bruton tyrosine kinase inhibitors (BTKi) including zanubrutinib, acalabrutinib, ibrutinib, and pirtobrutinib, bortezomib-based, venetoclax-based, and any other regimens. Patients were indexed on the day of tx initiation and followed until end of study period or loss to follow-up. Tx utilization patterns were examined by regimen, LOT and year. Time to next tx (TTNT) was calculated from start of the index LOT to the start of the next LOT. Healthcare resource utilization (HCRU) was reported as outpatient visits, inpatient services, and other services per patient per month (PPPM).

Results: 7,503 MCL patients initiated 1L, and 4,506 and 1,383 patients initiated 2L and 3L+ therapies, respectively. Mean age at baseline was 67.6 in 1L, 69.6 in 2L, and 70.5 in 3L+. Patients were primarily male (1L:70.5%; 2L: 71.7%; 3L+:74.8%) and White/Non-Hispanic (1L: 62.8%; 2L: 62.7%; 3L+: 68.7%); Black/Non-Hispanic and Hispanic patients accounted for 10% across all LOTs. Patients presented with significant burden of chronic conditions, with mean Charlson comorbidity index score 6.7 in 1L and 4.7 in 2L+. In 1L, B-based was the most used regimen (45.4%), followed by R-mono (20.6%) and BTKi (13.7%). In 2L and 3L+ settings, BTKi was the most used regimen (2L:52.0%; 3L+:45.8%), followed by B-based (2L:13.7%; 3L+:8.2%) and R-mono (2L:10.3%; 3L+:12.4%). From 2019 to 2024, utilization of B-based and R-CHOP decreased while BTKi use increased across all LOT (Figure). In MCL patients, mean TTNT was 16.3 months in 1L, 17.7 in 2L, and 17.6 in 3L+. HCRU was substantial in MCL patients. Mean outpatient visits were 4.02, 3.02, and 3.41 PPPM in 1L, 2L, and 3L+ respectively. Mean inpatient service utilization PPPM was 0.91, 1.01, and 1.44 in 1L, 2L, and 3L+ respectively. Across all LOT, outpatient utilization PPPM was the highest for R-CHOP (1L:5.72; 2L:6.43; 3L+:6.08) and B-based (1L:4.23; 2L:4.41; 3L+:4.85) while lowest for BTKi patients (1L:1.02; 2L:0.86; 3L+:0.76).

Conclusion: In this real-world study, chemotherapy-based regimens were associated with higher HCRU, while BTKi use increased across all LOTs. MCL patients mostly received tx that resulted in short TTNT and substantial HCRU, underscoring the unmet needs of MCL patients and highlighting needs for novel agents to lower BoD in MCL.

Figure: MCL Treatment Utilization Pattern, by Treatment Regimen, Line of Therapy and Year

