Real-World Evaluation of Treatment Pattern, Time to Next Treatment, Healthcare Resource Utilization, and Cost of Care in Follicular Lymphoma

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Background: Follicular lymphoma (FL) is the most common indolent non-Hodgkin lymphoma and accounts for nearly a quarter of cases. As a heterogenous disease, with an estimated 20% of patients having disease progression within 24 months of the first line of therapy, FL often quickly becomes relapsed or refractory to the current treatment.

Aims: This study aimed to evaluate the real-world treatment patterns, time to next treatment (TTNT), and associated costs and healthcare resource utilization (HCRU) in patients with FL in the United States.

Methods: A retrospective study was conducted using Optum® Clinformatics® Data Mart to identify patients ≥18 years with ≥1 diagnosis for FL initiating 1L, 2L, 3L, or 4L treatment from 1/2019 to 02/2023. Patients were required to be continuously enrolled for 30 days pre- and post-index date, defined as the date of treatment initiation. Patients were categorized into mutually exclusive cohorts based on treatment regimen. TTNT was measured for patients who had a subsequent treatment within the study period. Total cost of care included both plan- and patient-paid claims, adjusted for inflation (2023 USD). HCRU included outpatient visits and inpatient admissions. Costs and HCRU were reported per patient per month over the treatment duration.

Results: There were 4,525 patients initiating 1L treatment and 1,053, 304, and 97 patients initiating 2L, 3L, and 4L treatment, respectively. Median follow-up was 487 days (1L), 430 days (2L), 357 days (3L), and 276 days (4L). The mean age at the index was similar across cohorts (range: 69.6 [1L] to 71.9 [4L]). Rituximab monotherapy (R-mono) was the most utilized treatment in 1L and 2L, followed by bendamustine + rituximab (BR) and R-CHOP (Table). Lenalidomide + rituximab (R2) was the most utilized regimen in 3L and 4L. Obinutuzumab monotherapy (O-mono) use increased by line of therapy. The median TTNT across all regimens decreased by line of therapy (Table). BR and bendamustine + obinutuzumab (BO) had longer TTNT in 1L, while BR and R2 had longer TTNT in 3L. Inpatient admissions and outpatient visits increased with the line of therapy. Mean (SD) outpatient visits were 5.3 (3.2) in 1L, 5.8 (3.7) in 2L, 6.3 (4.0) in 3L, and 6.1 (3.3) in 4L, while inpatient admissions ranged from 0.1 (0.3) in 1L to 0.3 (0.4) in 4L. The mean total cost of care ranged from $40,538-$74,466, increasing by line of therapy. The mean total cost of care was consistently lowest in R-mono ($31,704-$36,197), while CAR-T had the highest total cost ($501,493-$522,378). R-mono had the lowest while R-CHOP had the highest mean outpatient visits across lines of therapy.

Summary/Conclusion: Real-world TTNT decreased while costs and HCRU increased with each subsequent line of treatment, indicating a high disease burden in FL patients, particularly for those with R/R FL. These findings suggest the need for better treatment options for patients with FL, especially in 3L and 4L.

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Table. Treatment utilization and TTNT in different lines of therapy

Line of Therapy	1L	2L	3L	4L
Treatment, utilization (%) / TTNT (median, days)				
BR	27.2 / 403	18.1 / 367	15.1 / 448	12.4 / 132
R-mono	32.1 / 313	23.8 / 348	16.1 / 232	12.4 / 553
R-CHOP	22.1 / 390	13.2 / 211	11.2 / 174	8.3 / 104
BO	4.6 / 679	5.8 / 255.5	4.6 / 203	1.0 / NA
R2	2.2 / 207	8.0 / 153	8.6 / 499	6.2 / NA
O-mono	1.5 / 98	1.4 / 213	2.3 / 56	4.1 / NA
Others	10.2 / 253	29.3 / 237	41.8 / 194	55.7 / 306

1L, first line; 2L, second line; 3L, third line; 4L, fourth line; BO, bendamustine + obinutuzumab; BR, bendamustine + rituximab; NA, not applicable; O-mono, obinutuzumab monotherapy; R2, lenalidomide + rituximab; R-CHOP, rituximab + cyclophosphamide + doxorubicin + vincristine + prednisone; R-mono, rituximab monotherapy; TTNT, time to next treatment.