Clinical and Financial Burden of Mental Health Conditions in Patients With Low-Grade Non-Hodgkin Lymphoma

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INTRODUCTION

- Low-grade non-Hodgkin lymphoma (LG-NHL) encompasses a number of cancers including chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL), follicular lymphoma (FL), mantle cell lymphoma (MCL), Waldenström macroglobulinemia (WM), and marginal zone lymphoma (MZL)
- LG-NHL is often incurable, imposing a prolonged impact of cancer care burden for patients

OBJECTIVE

- This study aimed to quantify the clinical and economic burden of mental health (MH) conditions in patients with newly diagnosed CLL/SLL, FL, MCL, WM, or MZL in the US

METHODS

Data Source

- The study was conducted using Optum® Clinformatics® Data Mart, a comprehensive, longitudinal, closed-claims database

Inclusion Criteria

- Patients aged ≥18 years with ≥1 first diagnosis of CLL/SLL, FL, MCL, WM, or MZL were included
- The study period was from May 1, 2016, to June 30, 2023, with an index period of June 30, 2016, to June 30, 2022
- The index date was the date of first cancer diagnosis
- Eligible patients had continuous enrollment in the database for 60 days prior to and 365 days after the index date
- Patients were followed for a minimum of 365 days through loss to follow-up or end of the study period (June 30, 2023)

Mental Health Conditions

- MH conditions of interest included:
  - Anxiety
  - Depression
  - Stress reaction/adjustment disorder
  - Insomnia
  - Post-traumatic stress disorder (PTSD)
- Prevalence and incidence of MH conditions were categorized based on if MH condition diagnoses were before or after the index date
- Baseline demographics, healthcare resource utilization (outpatient visits and inpatient admissions) and total cost of care (costs incurred from outpatient visits, inpatient admissions, emergency room visits, pharmacy, and other/ancillary services) were measured for LG-NHL patients with prevalent or incident MH

RESULTS

Patients (Table 1)

- 36,054 patients were newly diagnosed with one of the cancers of interest, LG-NHL, during the index period

Table 1. Patient Demographics

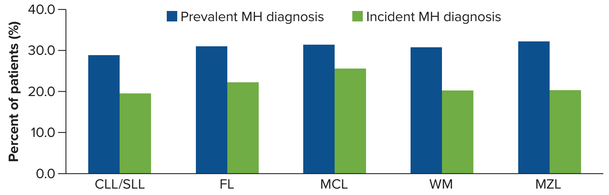
Characteristic	CLL/SLL	FL	MCL	WM	MZL
N	19,891	9715	1728	1738	2982
Age, mean (SD)	71.9 (10.2)	69.3 (11.8)	71.1 (10.4)	74.0 (9.5)	69.7 (11.9)
Sex, % male	54.5	48.0	65.5	56.0	41.6
Race (%					
Asian	2.0	2.8	2.1	3.3	3.2
Black	7.9	7.7	6.7	8.2	9.1
White	84.4	83.3	85.5	84.3	81.4
Missing/unknown	6.2	6.2	5.7	4.2	5.7
Ethnicity, % Non-Hispanic	90.7	90.7	92.1	93.2	90.1

CLL, chronic lymphocytic leukemia; FL, follicular lymphoma; MCL, mantle zone lymphoma; MZL, marginal zone lymphoma; SD, standard deviation; SLL, small lymphocytic lymphoma; WM, Waldenström macroglobulinemia.

Rates of MH Conditions (Figure 1)

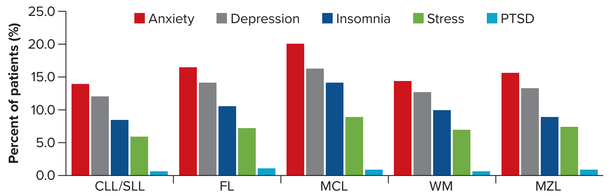
- Approximately half (48.0%-57.2%) of patients had either a prevalent or incident MH condition during the study period
- Median time from cancer diagnosis to onset of any MH condition was 334 days for CLL/SLL, 301 for FL, 248 for MCL, 351 for WM, and 328 for MZL
- Anxiety and depression were the most frequently diagnosed MH conditions, affecting 30.9% to 39.2% and 27.5% to 31.9% of patients, respectively (**Figure 2** and **Figure 3**)

Figure 1. Rates of Any Prevalent or Incident MH Condition by Cancer Type



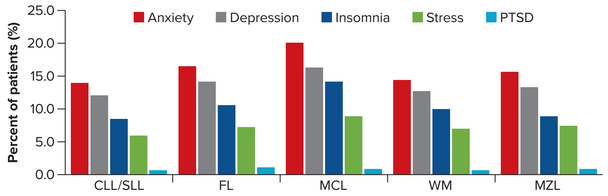
CLL, chronic lymphocytic leukemia; FL, follicular lymphoma; MCL, mantle zone lymphoma; MH, mental health; MZL, marginal zone lymphoma; SLL, small lymphocytic lymphoma; WM, Waldenström macroglobulinemia.

Figure 2. Rates of Incident MH Conditions by Cancer Type



CLL, chronic lymphocytic leukemia; FL, follicular lymphoma; MCL, mantle zone lymphoma; MH, mental health; MZL, marginal zone lymphoma; PTSD, post traumatic stress disorder; SLL, small lymphocytic lymphoma; WM, Waldenström macroglobulinemia.

Figure 3. Rates of Prevalent MH Conditions by Cancer Type

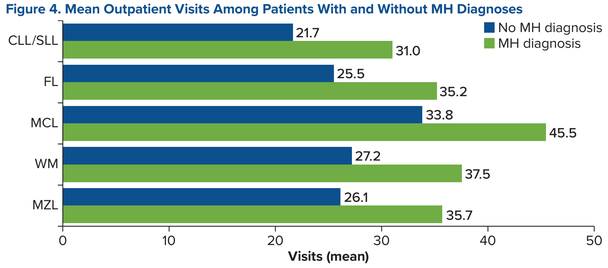


CLL, chronic lymphocytic leukemia; FL, follicular lymphoma; MCL, mantle zone lymphoma; MH, mental health; MZL, marginal zone lymphoma; PTSD, post traumatic stress disorder; SLL, small lymphocytic lymphoma; WM, Waldenström macroglobulinemia.

Healthcare Resource Utilization

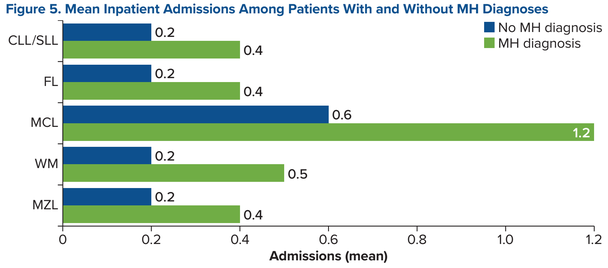
- The mean number of outpatient visits within the year after a cancer diagnosis was statistically higher, ranging from 1.3 to 1.4 times more, among those with a MH diagnosis compared to those without (**Figure 4**)
- Mean inpatient admissions were statistically higher (2.0 to 2.6 times) in those with MH conditions compared to those without (**Figure 5**)

Figure 4. Mean Outpatient Visits Among Patients With and Without MH Diagnoses



CLL, chronic lymphocytic leukemia; FL, follicular lymphoma; MCL, mantle zone lymphoma; MH, mental health; MZL, marginal zone lymphoma; SLL, small lymphocytic lymphoma; WM, Waldenström macroglobulinemia.

Figure 5. Mean Inpatient Admissions Among Patients With and Without MH Diagnoses



CLL, chronic lymphocytic leukemia; FL, follicular lymphoma; MCL, mantle zone lymphoma; MH, mental health; MZL, marginal zone lymphoma; SLL, small lymphocytic lymphoma; WM, Waldenström macroglobulinemia.

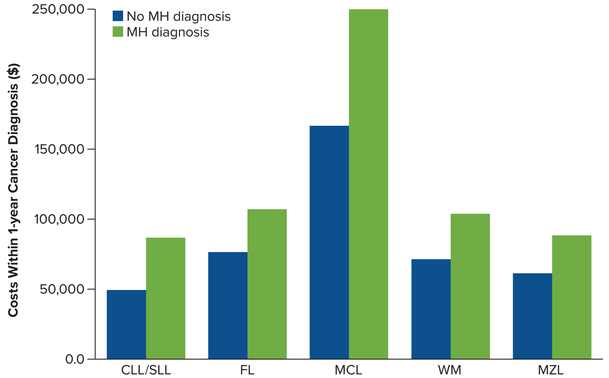
CONCLUSIONS

- This real-world study uncovered a high proportion of LG-NHL patients suffer from MH conditions, incurring higher financial burden than those without
- With advancements in new treatments, there remains unmet need of MH burden in these patients

Total Cost of Care

- Total costs of care in the 1-year post cancer diagnosis were statistically higher (1.4 to 1.7 times) for those with an MH condition (**Figure 6**)

Figure 6. Total Cost of Care Among Patients With and Without MH Diagnoses (1-year Post Cancer Diagnosis)



CLL, chronic lymphocytic leukemia; FL, follicular lymphoma; MCL, mantle zone lymphoma; MH, mental health; MZL, marginal zone lymphoma; SLL, small lymphocytic lymphoma; WM, Waldenström macroglobulinemia.

DISCUSSION

- The study is observational in nature and can only suggest associations, not establish causation
- The post index inclusion criteria of continuous enrollment of 365 days may have potentially excluded otherwise eligible patients from the study and hence, the results may be under-reported

DISCLOSURES

KY: Employment: BeiGene; Stock and Other Ownership Interests: BeiGene. **KE:** Employment: Real Chemistry. **PC:** No Relationships to Disclose. **WF:** Employment: Real Chemistry; Stock and Other Ownership Interests: Real Chemistry. **ACK:** Leadership: Cellectar, STARTON Therapeutics; Stock and Other Ownership Interests: Cellectar; Matthew & Asher Inc., NanoDev Therapeutics, STARTON Therapeutics; Honoraria: Ascentage Pharma, BeiGene; Consulting or Advisory Role: Ascentage Pharma Group; Research Funding: Ascentage Pharma; Patents, Royalties, Other Intellectual Property, Patent on PSMB9 biomarker: Tabi Vaccine.

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