

Real-World Mental Health Burden in Patients with Chronic Lymphocytic Leukemia

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OBJECTIVE

To assess mental health burden-related healthcare resource use (MHB-HCRU) across treatment phases in adult patients diagnosed with chronic lymphocytic leukemia (CLL) or initiating CLL treatment

CONCLUSIONS

Patients with CLL on surveillance had a greater rate of mental health (MH)-related encounters when compared with CLL patients initiating first-line (1L) and second-line (2L) treatment

Among patients with CLL who experienced a MH-related encounter, >40% experienced an encounter within 1 month of CLL diagnosis

These data emphasize the importance of the physician's role in the assessment and treatment of mental health in patients with CLL

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INTRODUCTION

- The time from CLL diagnosis to initial treatment can range from years to decades¹
- This active surveillance (ie, watch and wait) period may provoke feelings of uncertainty, leading to symptoms of MH disorders^{2,3}
- Patient-first language maintained a range of emotions and MH changes as they navigate their diagnosis and treatment⁴

- Data on MH burden (MHB) among patients with CLL is limited, and the impact of CLL and the surveillance period on MHB is unclear^{3,5}

METHODS

Study and patient population

- This retrospective observational study using Optum Clinformatics Data Mart® assessed MHB and cognitive impairment (CI) in adult patients diagnosed with CLL or initiating CLL treatment (2009–2021), excluding patients with MHB/CI encounters within 24 months pre-index
- Patients were stratified by incident CLL, or new 1L or 2L treatment for both MHB and CI assessments; key selection criteria are provided to the right (full attrition available with QR code)
 - Index date was defined as the date of initial diagnosis for the incident CLL cohort, and the date of 1L initiation for both 1L and 2L cohorts

Study outcomes

- MHB-HCRU and CI-related HCRU (CI-HCRU) were based on diagnosis/prescription claims for MH (ie, anxiety, depression) and CI (ie, dementia, Alzheimer's) post-CLL diagnosis (surveillance), 1L, or 2L treatment and reported as mean encounters per patient per month (PPPM)
- Time to first MHB-HCRU and CI-HCRU among treatment-naïve patients with incident CLL was assessed using Kaplan-Meier methodology

RESULTS

Patient population and characteristics

- Within the MHB-free at baseline cohort (N=7734) there were 2253 patients with incident CLL, 4011 patients initiating 1L treatment, and 1470 patients initiating 2L treatment; within the CI-free at baseline cohort (N=11,755) there were 3348 patients with incident CLL, 6190 patients initiating 1L treatment, and 2217 patients initiating 2L treatment
 - Baseline characteristics were similar between patient groups within cohorts (Table 1)

Table 1. Baseline Characteristics Were Similar Between Patient Groups within the MHB or CI Cohorts

Characteristic	MHB Cohort			CI Cohort		
	Incident CLL (n=2253)	1L (n=4011)	2L (n=1470)	Incident CLL (n=3348)	1L (n=6190)	2L (n=2217)
Age, mean (SD)	75.58 (11.21)	73.03 (10.07)	74.31 (9.81)	74.34 (11.61)	72.14 (10.17)	73.57 (9.87)
Sex						
Female	818 (36.32)	1344 (33.52)	489 (33.29)	1447 (43.23)	2447 (39.55)	844 (38.12)
Male	1434 (63.68)	2666 (66.48)	980 (66.71)	1900 (56.77)	3740 (60.45)	1370 (61.88)
Race						
Asian	45 (2.09)	55 (1.43)	20 (1.41)	52 (1.63)	85 (1.43)	29 (1.36)
Black	214 (9.93)	398 (10.37)	139 (9.81)	303 (9.48)	555 (9.37)	188 (8.81)
White	1723 (79.95)	3148 (82)	1154 (81.44)	2570 (80.44)	4903 (82.74)	1756 (82.25)
Hispanic	173 (8.03)	238 (6.20)	104 (7.34)	270 (8.45)	383 (6.46)	162 (7.59)
CCI, mean (SD)	2.19 (2.33)	3.39 (1.72)	3.55 (1.82)	2.50 (2.50)	3.45 (1.76)	3.63 (1.90)
Baseline number of outpatient encounters ^a	2114 (93.83)	4009 (99.95)	1469 (99.93)	3210 (95.88)	6188 (99.97)	2214 (99.86)
Baseline number of inpatient encounters ^a	708 (31.42)	1407 (35.08)	582 (39.59)	1293 (38.62)	2286 (36.93)	922 (41.59)
Baseline number of ED encounters ^a	785 (34.84)	1321 (32.93)	553 (37.62)	1387 (41.43)	2169 (35.04)	878 (39.60)
Payor						
Commercial	423 (18.77)	1021 (25.45)	354 (24.08)	639 (19.09)	1664 (26.88)	560 (25.26)
Medicare	1830 (81.23)	2990 (74.55)	1116 (75.92)	2709 (80.91)	4526 (73.12)	1657 (74.74)
Census region						
Midwest	574 (25.56)	1103 (27.51)	393 (26.73)	827 (24.76)	1662 (26.86)	558 (25.18)
Northeast	349 (15.54)	426 (10.62)	137 (9.32)	469 (14.04)	647 (10.46)	205 (9.25)
South	805 (35.84)	1456 (36.31)	549 (37.35)	1260 (37.72)	2320 (37.49)	855 (38.58)
West	518 (23.06)	1025 (25.56)	391 (26.60)	784 (23.47)	1559 (25.19)	598 (26.99)

Data are presented as n (%) unless stated otherwise. ^aThe baseline period was 1-year prior to the index date. 1L, first-line; 2L, second-line; CCI, Charlson comorbidity index; CI, cognitive impairment; CLL, chronic lymphocytic leukemia; Dx, diagnosis; ED, emergency department; MHB, mental health burden; N/A, not applicable; Px, prescription code.

Mental health and cognitive impairment outcomes

- Among 7734 patients (mean age 73.03–75.58 years) assessed for MHB, patients on surveillance (n=2253) versus those initiating 1L (n=4011) or 2L (n=1470) had greater rates of MH encounters PPPM (mean [SD]=0.21 [1.33] versus 1L: 0.07 [0.31] $P<0.00001$; and 2L: 0.10 [0.46]) (Figure 1)
 - Results were similar in the CI cohort (N=11,755); patients on surveillance (n=3348) versus those initiating 1L (n=6190) or 2L (n=2217) had greater rates of CI encounters PPPM (mean [SD]=0.08 [0.38] versus 1L: 0.02 [0.18] $P<0.00001$; and 2L: 0.03 [0.29])
- Among 2253 patients on surveillance assessed for MHB-HCRU, 21.22% experienced ≥1 encounter during a median (IQR) follow-up of 9.92 (2.23–28.52) months
 - Among 3348 patients on surveillance assessed for CI-HCRU, 13.50% experienced ≥1 encounter during a median follow up of 10.15 (2.27–29.26) months

Key inclusion criteria

- ≥18 years of age
- ≥1 inpatient or ≥2 outpatient claims ≥30 days apart and within 12 months of the first claim with a CLL/small lymphocytic lymphoma (SLL) diagnosis code
- ≥24 months of continuous enrollment in medical and pharmacy benefits with 30 days allowable gap days pre-index and ≥1-month post-index date

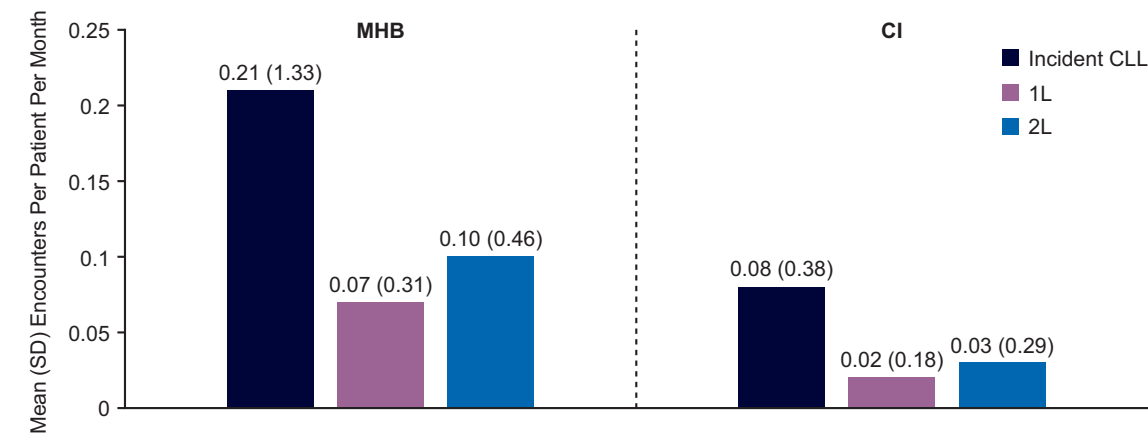
Key Exclusion criteria

- Patients with any prescription claims for treatments approved for CLL/SLL during the 24-month period prior to the index date
- Patients with evidence of marginal zonal lymphoma, mantle cell lymphoma, Waldenstrom macroglobulinemia, and acute myeloid leukemia
- Clinical trial participation

Data analyses

- Baseline patient characteristics were summarized using mean, standard deviation, or frequencies and percentages
- MHB- and CI-related HCRU mean encounters PPPM were compared across cohorts using Wilcoxon Mann-Whitney tests

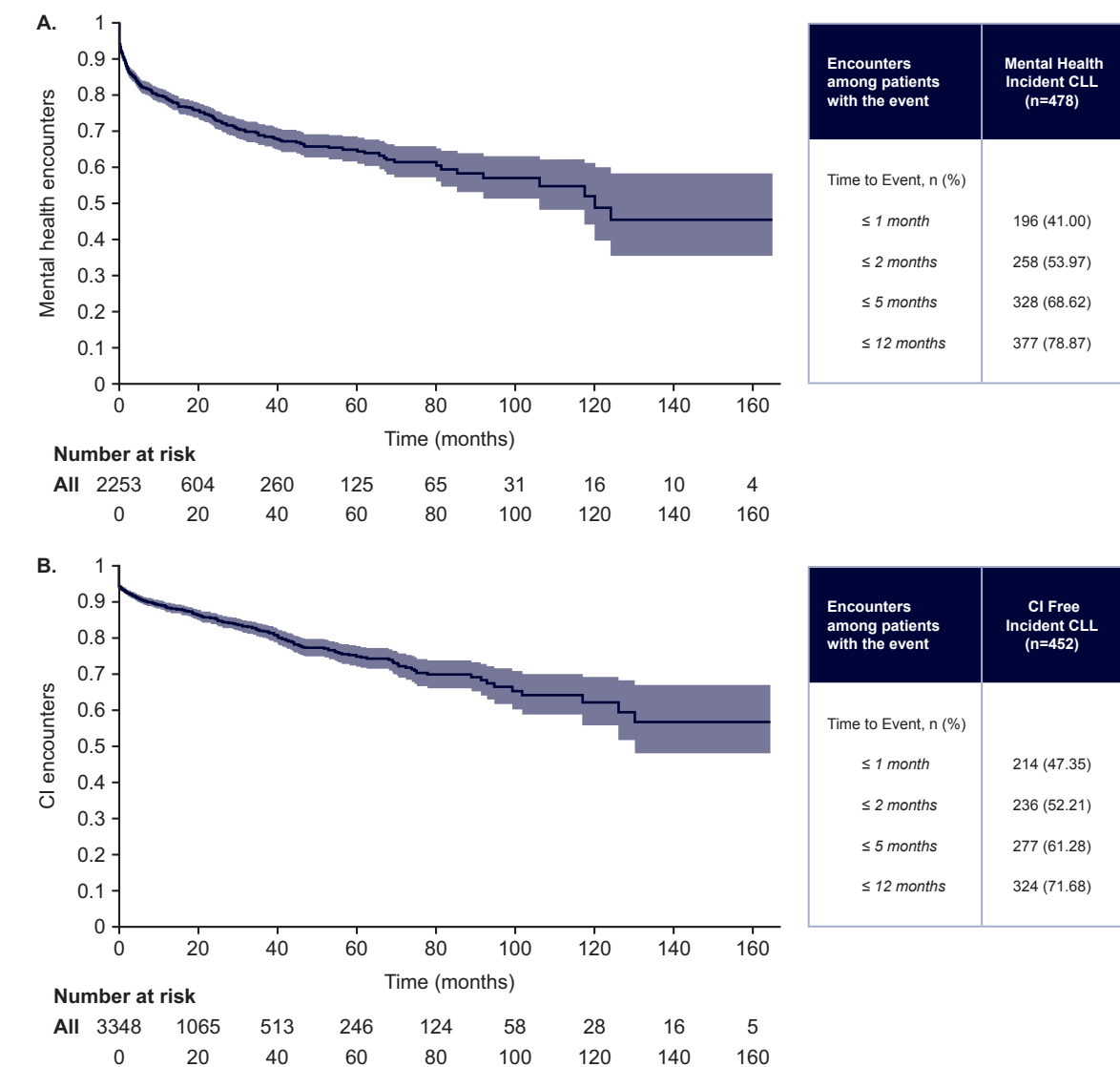
Figure 1. Patients with CLL on Surveillance Versus Those Initiating 1L or 2L Treatment Had Greater Rates of MH and CI Encounters PPPM



1L, first-line; 2L, second-line; CI, cognitive impairment; CLL, chronic lymphocytic leukemia; MHB, mental health burden; PPPM, per patient per month; SD, standard deviation.

- Among patients with a MHB encounter, the median (IQR) time to first MHB encounter was 1.64 (0.03–8.38) months, and 41.0% experienced a MHB encounter within 1 month of follow-up (Figure 2A)
 - Similar results were seen for patients with a CI encounter; the median (IQR) time to first CI encounter was 1.53 (0.03–17.14) months, and 47.35% experienced a CI encounter within 1 month of follow-up (Figure 2B)

Figure 2. Kaplan-Meier Curves for (A) Mental Health Encounters and (B) CI Encounters in Patients with Incident CLL During the Post-Index Follow-up Period



1L, first-line; 2L, second-line; CI, cognitive impairment; CLL, chronic lymphocytic leukemia.