**APPENDIX**

**Supplemental Tables/Figures**

**Economic Burden of Cardiovascular Events in Patients with Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma in the First Year After Initiating Treatment with a Novel Agent**

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This Appendix has not been edited and is provided as supplemental materials for this article, which was published in the *Journal of Hematology Oncology Pharmacy* in February 2023.

**Table 1.** Diagnosis Codes used to Define Cardiovascular (CV) Events1

|  |  |  |
| --- | --- | --- |
| **CV Event** | **ICD-9-CM Diagnosis Codes** | **ICD-10-CM Diagnosis Codes** |
| Cardiomyopathy | 425.8, 425.9 | I42.x, I43 |
| Conduction Disorder | 426.xx | I44.x, I45.x |
| Heart Failure | 428.x, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93 | I40.1, I50.2x, I50.3x, I50.4x, I50.8x, I50.9, I11.0, I13.0, I13.2 |
| Hypertension | 401.x, 402.00, 402.10, 402.90, 403.x, 404.00, 404.02, 404.10, 404.12, 404.90, 404.92, 405.x | I10, I11.9, I12.x, I13.1x, I15.x, I16.x, R03.0 |
| Myocardial Infarction | 410.xx | I21.xx, I22.x |
| Ventricular Arrythmia | 427.1, 427.2, 427.41, 427.42 | I47.0, I47.2, I47.9, I49.01, I49.02 |
| Supraventricular Arrythmia | 427.0, 427.31, 427.32 | I47.1, I47.9, I48.x |

1CV events were identified by at least one inpatient or outpatient non-ruleout claim with a diagnosis for the CV event. Non-ruleout claims are those for a professional encounter, not a laboratory test or imagining study used to diagnose a condition.

**Table 2.** Unadjusted healthcare resource utilization and costs during the follow-up period

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Service or Cost** | **Variable-Length Follow-Up (Annualized)1** | | | **Variable-Length Follow-Up (PPPM)2** | | | | |
| **CV Cohort**  **N=522** | **NoCV Cohort**  **N=1,364** | ***P*-value** | **Pre-CV Event N=522** | | **Post-CV Event N=522** | | ***P*-value** | |
| **Healthcare Service** |  |  |  |  |  | |  | | | | |
| **Any hospital admission, N (%)** | 263 (50.4%) | 301 (22.1%) | **<0.001** | 68 (13.0%) | 230 (44.1%) | | **<0.001** | |
| Number of admissions, mean (SD) | 1.35 (2.10) | 0.55 (1.54) | **<0.001** | 0.05 (0.15) | 0.16 (0.28) | | **<0.001** | |
| Length of stay, days, mean (SD) | 18.70 (25.38) | 16.23 (29.68) | 0.093 | 1.95 (2.47) | 2.61 (3.67) | | **<0.001** | |
| **Outpatient services, N (%)** | 522 (100.0%) | 1356 (99.4%) | 0.116 | 472 (90.4%) | 522 (100.0%) | | **<0.001** | |
| Emergency Room (ER) visits, N (%) | 254 (48.7%) | 387 (28.4%) | **<0.001** | 97 (18.6%) | 207 (39.7%) | | **<0.001** | |
| Number of visits, mean (SD) | 1.59 (2.69) | 0.79 (2.14) | **<0.001** | 0.09 (0.27) | 0.14 (0.26) | | **0.003** | |
| Physician office visits, N (%) | 512 (98.1%) | 1,333 (97.7%) | 0.634 | 442 (84.7%) | 473 (90.6%) | | **0.004** | |
| Number of visits, mean (SD) | 24.80 (14.46) | 20.93 (12.95) | **<0.001** | 1.89 (1.56) | 1.93 (1.35) | | 0.676 | |
| Other outpatient services, N (%) | 522 (100.0%) | 1,347 (98.8%) | **0.005** | 455 (87.2%) | 517 (99.0%) | | **<0.001** | |
| Number of visits, mean (SD) | 62.46 (71.52) | 39.50 (37.41) | **<0.001** | 3.74 (4.65) | 5.37 (7.01) | | **0.002** | |
| **Outpatient pharmacy, N (%)** | 522 (100.0%) | 1,364 (100.0%) | 1.000 | 514 (98.5%) | 488 (93.5%) | | **<0.001** | |
| Number of prescriptions, mean (SD) | 50.94 (28.37) | 43.02 (26.62) | **<0.001** | 3.91 (2.64) | 4.20 (2.45) | | 0.137 | |
| Novel agent therapy, N (%) | 522 (100.0%) | 1,364 (100.0%) | 1.000 | 514 (98.5%) | 382 (73.2%) | | **<0.001** | |
| Number of prescriptions, mean (SD) | 9.66 (4.15) | 10.82 (4.31) | **<0.001** | 1.06 (0.30) | 0.59 (0.45) | | **<0.001** | |
|  |  |  |  |  |  | |  | |
| **Healthcare Costs** |  |  |  |  |  | |  | |
| **Any hospital admission, mean (SD)** | $51,865 ($137,049) | $24,241 ($124,732) | **<0.001** | $1,259 ($6,171) | $7,190 ($21,560) | | **<0.001** | |
| **Any outpatient service, mean (SD)** | $47,646 ($81,826) | $33,192 ($68,035) | **<0.001** | $2,934 ($6,759) | $4,155 ($7,631) | | **0.006** | |
| ER visits, mean (SD) | $2,580 ($8,250) | $1,191 ($5,282) | **<0.001** | $142 ($649) | $229 ($870) | | 0.070 | |
| Physician office visits, mean (SD) | $3,366 ($2,536) | $2,763 ($2,307) | **<0.001** | $266 ($290) | $267 ($235) | | 0.942 | |
| Other outpatient services, mean (SD) | $41,700 ($76,586) | $29,238 ($66,085) | **<0.001** | $2,526 ($6,526) | $3,659 ($7,184) | | **0.008** | |
| **Outpatient pharmacy, mean (SD)** | $117,062 ($75,502) | $126,622 ($57,761) | **0.003** | $12,425 ($5,889) | $7,186 ($5,866) | | **<0.001** | |
| Novel agent therapy, mean (SD) | $110,015 ($70,682) | $121,558 ($55,277) | **<0.001** | $11,932 ($5,313) | $6,667 ($5,768) | | **<0.001** | |
| **Total Healthcare Costs, mean (SD)** | $216,573 ($181,588) | $184,055 ($158,781) | **<0.001** | $16,619 ($11,633) | $18,531 ($23,278) | | 0.093 | |
|  |  |  |  |  |  | |  | | | |

**1**Healthcare utilization in the variable-length follow-up period was reported as annualized totals, comparing the CV cohort to the NoCV cohort.

2Healthcare utilization in the variable-length pre-CV and post-CV event periods were reported as per-patient-per-month (PPPM), comparing time periods for patients in the CV cohort.

**Figure 1.** Study Time Periods

Timeline

Description automatically generated

**Figure 2.** Total all-cause healthcare costs in 30-day months surrounding the CV event date among CLL/SLL patients in the CV cohort1

Chart

Description automatically generated

1 This analysis was limited to patients in the CV Cohort (N=522); costs were reported as total cost measured in each 30-day period. Patients had to have continuous enrollment for the full 30-day period to be included in that period; no patients had continuous enrollment for the full 30-day periods 10-12 months prior to the CV event date or 12 months after the CV event date.

2 The CV event date is centered in period 0; period 0 includes 15 days prior to the CV event date through 14 days after the CV event date.