Real-World Switching Pattern, Persistence, and Associated Healthcare Resource Utilization of Bruton Tyrosine Kinase Inhibitors for the Treatment of Mantle Cell Lymphoma in the United States

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Background: Bruton tyrosine kinase inhibitors (BTKi) are approved for relapsed/refractory mantle cell lymphoma (MCL); however, it is unclear how BTKi are utilized in the real-world. This study aimed to examine treatment (tx) patterns, persistence, and associated healthcare resource utilization (HCRU) of BTKi use in patients (pts) with MCL in the US.

Material and Methods: This retrospective observational study used Symphony Integrated Dataverse and integrated Electronic Medical Record data. Pts aged ≥18 years with ≥1 MCL diagnosis who initiated a BTKi between 1/1/20 and 12/31/22 were included. Continuous enrollment for 365 days before and ≥90 days after BTKi initiation was required. Previous BTKi use and switching patterns were identified from pt history data. Ibrutinib (ibru), acalabrutinib (acala), and zanubrutinib (zanu) cohorts were based on first-initiated BTKi. Pts were followed through 3/31/23. Tx switching pattern, duration, persistence, time to discontinuation (TTD), and HCRU were examined for each cohort.

Results: Data from 1,674 pts (acala [n= 697]; ibru [n=693]; zanu [n=284]) were included. Switching rates were 23.8% for ibru (72.7% switched to acala), 5.6% for acala (59.9% switched to zanu), and 2.8% for the zanu cohort (50.0% switched to acala and 50.0% to ibru). The mean number of outpatient visits and the mean number of inpatient services per patient per month (PPPM) was 1.39 and 0.39, respectively, for pts who initiated with ibru then switched to zanu, and 1.49 and 0.59 for those who switched to acala. The 3 BTKi cohorts were similar across sociodemographic characteristics. Pts had higher median TTD and median tx duration with zanu (188.5 and 200 days, respectively) compared with ibru (161.5 and 171 days) and acala (179 and 194 days). In pts continuously enrolled for ≥360 days, zanu pts had higher persistence rates (p=0.0079). Persistence at 90 and 360 days was 66.9% and 16.9%, respectively, for zanu, 56.3% and 10.8% for ibru, and 62.7% and 13.2% for acala. The mean number of inpatient services and outpatient visits PPPM was lowest with zanu (0.56 and 1.53, respectively) compared with ibru (0.83 and 1.81) and acala (0.71 and 1.59).

Conclusions: This real-world study suggested that US pts with MCL receiving zanu showed longer tx persistence, tx duration and TTD, as well as lower switching rates and HCRU compared with pts receiving acala and ibru.