## Supplemental Data

| Supplemental Table 1 | Demographic and Clinical Characteristics During the 12-month Baseline Period for the Ibrutinib Versus BR Comparison | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Unweighted Populations | | | | | Weighted Populations[a] | | | | |
| | Ibrutinib | | BR | | | Ibrutinib | | BR | | |
| | N = 322 | | N = 455 | | | N = 387 | | N = 390 | | |
| | n | % | n | % | Std Diff, % | n | % | n | % | Std Diff, % |
| Demographics | | | | | | | | | | |
| Male gender | 186 | 57.8 | 286 | 62.9 | 10.4 | 220 | 56.8 | 231 | 59.3 | 5.1 |
| Mean age,[b] y ± SD [median] | 72.5 | ± 10.8 [74.0] | 69.5 | ± 9.8 [70.0] | 30.0 | 70.8 | ± 10.8 [72.0] | 70.5 | ± 10.0 [71.0] | 2.5 |
| Year of index date | | | | | | | | | | |
| 2014 | 24 | 7.5 | 118 | 25.9 | 51.2 | 76 | 19.6 | 71 | 18.3 | 3.2 |
| 2015 | 64 | 19.9 | 131 | 28.8 | 20.9 | 98 | 25.3 | 102 | 26.2 | 2.2 |
| 2016 | 147 | 45.7 | 118 | 25.9 | 42.0 | 128 | 33.1 | 130 | 33.4 | 0.5 |
| 2017 | 87 | 27.0 | 88 | 19.3 | 18.3 | 85 | 22.0 | 86 | 22.1 | 0.1 |
| Region[b] | | | | | | | | | | |
| South | 109 | 33.9 | 168 | 36.9 | 6.4 | 128 | 33.1 | 138 | 35.4 | 4.9 |
| West | 94 | 29.2 | 104 | 22.9 | 14.5 | 101 | 26.1 | 101 | 26.0 | 0.3 |
| Midwest | 82 | 25.5 | 131 | 28.8 | 7.5 | 119 | 30.8 | 109 | 27.9 | 6.3 |
| Northeast | 36 | 11.2 | 47 | 10.3 | 2.7 | 37 | 9.6 | 39 | 9.9 | 1.0 |
| Unknown | 1 | 0.3 | 5 | 1.1 | 9.4 | 1 | 0.4 | 3 | 0.7 | 5.0 |
| Inusrance plan type[b] | | | | | | | | | | |
| Medicare | 243 | 75.5 | 305 | 67.0 | 18.7 | 278 | 71.8 | 275 | 70.6 | 2.6 |
| Commercial insurance | 79 | 24.5 | 150 | 33.0 | 18.7 | 109 | 28.2 | 115 | 29.4 | 2.6 |
| Clinical characteristics | | | | | | | | | | |
| Mean time between the first CLL diagnosis and the index date, mos ± SD [median] | 24.5 | ± 24.3 [17.8] | 17.8 | ± 22.2 [11.0] | 28.5 | 19.9 | ± 21.2 [14.4] | 19.9 | ± 23.9 [13.1] | 0.4 |
| Use of corticosteroids[c] | 140 | 43.5 | 179 | 39.3 | 8.4 | 166 | 43.0 | 162 | 41.5 | 3.0 |
| Comorbidities[d] | | | | | | | | | | |
| Hypertension | 198 | 61.5 | 285 | 62.6 | 2.4 | 250 | 64.6 | 249 | 63.9 | 1.6 |
| Lymphoma | 124 | 38.5 | 262 | 57.6 | 38.9 | 186 | 48.1 | 194 | 49.7 | 3.1 |
| Deficiency anemias | 146 | 45.3 | 188 | 41.3 | 8.1 | 161 | 41.6 | 165 | 42.4 | 1.6 |
| Diabetes | 88 | 27.3 | 143 | 31.4 | 9.0 | 95 | 24.5 | 114 | 29.2 | 10.6 |
| Coagulation deficiency | 92 | 28.6 | 107 | 23.5 | 11.5 | 98 | 25.2 | 98 | 25.1 | 0.4 |
| Chronic pulmonary disease | 88 | 27.3 | 106 | 23.3 | 9.3 | 114 | 29.4 | 102 | 26.2 | 7.2 |

| | Unweighted Populations | | | | | Weighted Populations[a] | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Ibrutinib | | BR | | | Ibrutinib | | BR | | |
| | N = 322 | | N = 455 | | | N = 387 | | N = 390 | | |
| | n | % | n | % | Std Diff, % | n | % | n | % | Std Diff, % |
| CLL-related comorbidities[d] | | | | | | | | | | |
| Anemia | 147 | 45.7 | 189 | 41.5 | 8.3 | 162 | 41.9 | 166 | 42.7 | 1.6 |
| Enlarged lymph nodes | 149 | 46.3 | 253 | 55.6 | 18.7 | 202 | 52.1 | 205 | 52.7 | 1.1 |
| Abdominal pain | 68 | 21.1 | 101 | 22.2 | 2.6 | 79 | 20.5 | 85 | 21.9 | 3.3 |
| Fatigue/weakness | 115 | 35.7 | 163 | 35.8 | 0.2 | 132 | 34.1 | 139 | 35.6 | 3.1 |
| Thrombocytopenia | 79 | 24.5 | 99 | 21.8 | 6.6 | 86 | 22.1 | 89 | 22.9 | 1.8 |
| Mean Charlson comorbidity index[d] ± SD [median] | 3.9 | ± 2.2 [3.0] | 3.8 | ± 2.0 [3.0] | 6.9 | 3.8 | ± 2.1 [3.0] | 3.9 | ± 2.0 [3.0] | 5.1 |

Abbreviations: BR = Bendamustine/rituximab; CLL = chronic lymphocytic leukemia; SD = standard deviation; Std diff = standardized difference.

[a]Baseline characteristics for the weighted populations were obtained by using inverse probability of treatment weights. The inverse probability of treatment weights were estimated based on propensity score. Variables used in the propensity score calculation included the following baseline characteristics: age, gender, region, quarter and year of index date, insurance plan type, time from first CLL diagnosis to index date, Charlson comorbidity index, comorbidities (hypertension, lymphoma, deficiency anemias, diabetes, coagulation deficiency, chronic pulmonary disease), and baseline use of corticosteroids.

[b]Evaluated at the index date.

[c]Evaluated between the first CLL diagnosis and index date.

[d]Evaluated during the 12-month baseline period.