Disutilities were applied to each CML health state; values were derived from a published time-trade-off preference survey conducted among patients with CML-CP.

The willingness-to-pay (WTP) threshold was calculated as 3× the Russian per capita gross domestic product.

Patients with sustained MR4 were eligible for TFR, with ≈ 50% maintaining TFR beyond 12 months.

Nilotinib and dasatinib are second-generation TKIs indicated for the treatment of newly diagnosed CML-CP and in patients with CML-CP who are intolerant or resistant to imatinib.

There are no head-to-head clinical trials comparing nilotinib with dasatinib. However, there is real-world evidence to suggest that second-line nilotinib may provide better health outcomes than dasatinib (such as improved progression-free and overall survival rates).

Given the several TKIs available to treat CML-CP and the changing CML-CP treatment landscape, payers are interested in the cost and health outcome benefits of second-line nilotinib compared with dasatinib.

**METHODS**

A partitioned survival model was developed to examine the cost-effectiveness of nilotinib compared with dasatinib in the second-line setting in Russia, considering treatment recommendations from the ELN guidelines.

**RESULTS**

Due to improved MR, PFS, and OS, the benefits of nilotinib translated into the following:

- More total life-years (LYs) and quality-adjusted life-years (QALYs) gained.
- More years spent on second-line TKI treatment.
- More years spent in TFR.

Total costs were greater in the nilotinib-treated group (incremental difference: 2,045,055 RUB), despite a lower acquisition cost, due to patients remaining alive and on treatment for more years.

In a scenario analysis where the option to enter TFR in the model was removed, nilotinib continued to demonstrate an acceptable ICER when compared with dasatinib (1,420,351 RUB per QALY, data not shown).

**DISCUSSION**

Results were driven by estimates of TOT, PFS, and OS from a medical chart review, which represented the best available data for comparative effectiveness of nilotinib vs dasatinib.

A primary limitation of the study was the lack of head-to-head trials of nilotinib and dasatinib or trials with similar designs that could have been used to conduct an adjusted indirect comparison (such as a network meta-analysis).

A strength of this economic study was that it considered emerging treatment patterns based on the 2013 ELN guidelines and included the ability of patients to enter TFR.

**CONCLUSIONS**

Use of nilotinib compared with dasatinib is cost-effective for the second-line treatment of patients with CML-CP in a Russian public healthcare setting and resulted in greater LYs and QALYs.