Type 2 diabetes mellitus (T2DM) is a major public health problem and affects 10 million people in Europe. The cost-effectiveness analyses indicated that CANA (100 and 300 mg, with a weighted average of 65:35) is dominant in comparison with SITA 100 mg in dual therapy as add-on to MET, and in triple therapy as add-on to MET plus SU (Table 2). The annual costs of comparator drugs were based on the daily dose tested in the clinical trials.

For T2DM and its complications, health state utilities for the model were derived, wherever possible, from the UKPDS and supplemented with data from other sources as necessary.

The primary objective was to estimate the cost-effectiveness of CANA (100 and 300 mg) in dual therapy as add-on to MET, compared with SITA 100 mg (Table 1). The time horizon used was 1 year, with a willingness-to-pay threshold of at least €20,000 per QALY in each comparison.

In Portugal, the number of patients who are treated with antidiabetic drugs is estimated to have increased by over 10% over the past 10 years, from 1.7% of the Portuguese population in 2000 to 4.4% in 2016.

Caraflux (CAN) is a novel, oral AHA with sodium-glucose co-transporter 2 (SGLT2) inhibition added to the treatment of patients with T2DM. CANA was approved for use in the European Union in November 2019. The cost-effectiveness analyses suggested that CANA is also cost-effective from a payer perspective and when the cost of canagliflozin was assumed to be flat. The effectiveness of standard care was modeled using the UKPDS guidelines for T2DM. The model was implemented using TreeAge Pro. Sensitivity analyses were performed to determine the robustness of the results. The results of a network meta-analysis (NMA; Pacou et al and data on file) since direct comparisons were not available (Table 2).

Clinical Inputs – The Diabetes Care programme included a series of clinical trials evaluating CANA in T2DM in different dosing regimens and using different patient groups. Evidence on efficacy and safety from direct comparisons was used where available.

Patient baseline characteristics were taken from the relevant CANA clinical trial that was used in the model. Treatment effects were derived from the relevant clinical trial.

The estimate of the costs of new complications was obtained using the UKPDS Outcomes Guidelines for Economic Drug Evaluation Studies from INFARMED since direct comparisons were not available.

RESULTS – The cost-effectiveness analyses indicated that CANA (100 mg and 300 mg) with a weighted average of 65:35 is dominant in comparison with SITA 100 mg in dual therapy as add-on to MET, and in triple therapy as add-on to MET plus SU (Table 2).

In a sub-analytic study on SITA, CANA (100 mg) had an average cost saving of €24 and an average quality-adjusted life year (QALY) gain of 0.036. In triple therapy, CANA (100 mg) has a weighted average cost saving of €417 and an average QALY gain of 0.033.

We speculate that CANA also has cost-effectiveness benefits over a longer period and when the time horizon, which is 1 year in the base case, is reduced to 10 years (data not shown).

CONCLUSION – Using CANA, as opposed to SITA, for dual and triple therapy (add-on to MET or add-on to MET plus SU) was estimated to result in cost savings and increase in QALYs.

These analyses suggest that using CANA versus SITA is likely to be a cost-effective option for patients needing additional glucose control in Portugal.

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