

SGLT-2s Proven Effective in Decreasing Worsening Heart Failure (HF) and All-Cause Mortality

Overview of the Clinical Trials

CANVAS and CANVAS-R

- Over 10,000 participants, mean study duration 3.6 years
- Randomized to receive canagliflozin (Invokana®) or placebo
- All had Type 2 Diabetes (T2DM) and 66% had cardiovascular disease (CVD)
- Outcomes were integrated showing a significant reduction in 3-point MACE (cardiovascular death, nonfatal stroke, nonfatal MI) HR 0.86 and a lower rate of hospitalizations due to HF, HR 0.65

Dose adjustments needed for patients with eGFR of 45-60ml/min/1.73m²; MDD=100mg/day

Canagliflozin has been associated with a risk of lower limb amputations

EMPA-REG OUTCOME

- Over 7,000 participants, followed for 3.1 years
- Randomized to receive empagliflozin (Jardiance®) or placebo
- All had T2DM and 99% had established CVD
- Decreased rate of hospitalization due to HF, HR 0.65

Dose Adjustment needed: Do not initiate therapy if eGFR<45ml/min/1.73m²

VERTIS CV

- Completed in December of 2019, results are pending
 - All participants had T2DM and established cardiovascular disease
 - Study looked at cardiovascular outcomes following treatment with ertugliflozin (Steglatro™)
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DAPA-HF

- Over 4,700 patients with HFrEF, EF≤40 with NYHA Class II-IV
- 48% of the study participants did not have T2DM.
- Randomized to placebo or dapagliflozin (Farxiga®)
- Outcomes: Decreased rates of worsening HF and death from cardiovascular causes as well as all cause mortality in patients with and without T2DM

Safety Major hypoglycemia (defined as hypoglycemia requiring the assistance of another person to actively administer carbohydrates or glucagon or to take corrective action) occurred only in patients who were type 2 diabetics at baseline and occurred in 13 patients in the Dapagliflozin group and 12 patients in the placebo group.

Dose Adjustment needed: Do not use if eGFR<45ml/min/1.73m²

- **NNT=21** (95% CI 15-38)
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This emerging data suggests that SGLT-2s inhibitors have a place in treating Heart Failure patients with and without Type 2 Diabetes