

Investigating cost effectiveness of sodium-glucose cotransporter 2 inhibitors in patients with heart failure

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Sodium-glucose cotransporter 2 inhibitors (SGLT2i) are approved for heart failure with reduced ejection fraction (HFrEF). However, their cost-effectiveness remains unknown. The authors of an article published in *Cardiovascular Innovations and Applications* compare the cost-

effectiveness of SGLT2i versus mineralocorticoid antagonists (MRAs).

Data from the RALES, EPHESUS, EMPHASIS, DAPA-HF, and EMPEROR-Reduced trials were included. The researchers calculated the risk-ratio (RR) for a composite of cardiovascular death or heart failure hospitalization (CV death-HHF), all-cause mortality, and [heart failure](#) hospitalization (HHF) between MRAs and SGLT2i. A Markov model was developed to simulate the progression of HFrEF over five years. The primary outcome was incremental [cost-effectiveness](#) ratio (ICER), measured by cost per quality-adjusted life-year (QALY) gained.

The authors observed a similar benefit in CV death-HHF (RR 1.04; 95% CI 0.82–1.31), all-cause mortality (RR 0.91; 95% CI 0.78–1.06), and HHF (RR 1.05; 95% CI 0.84–1.31) between MRAs and SGLT2i. In a 5-year model, no difference in survival was observed between treatments.

MRAs were associated with lower cost (\$63,135.52 vs. \$80,365.31) and more QALYs gained per patient (2.53 versus 2.49) than SGLT2i. The ICER for SGLT2i versus MRAs was \$-172,014.25/QALY, in favor of MRAs.

The authors conclude that MRAs and SGLT2i provided similar benefits; however, MRAs were a more cost-effective treatment than SGLT2i.

More information: Jingchaun Guo et al, Cost Effectiveness of Sodium-Glucose Cotransporter 2 Inhibitors Compared with Mineralocorticoid Receptor Antagonists among Patients with Heart Failure and a Reduced Ejection Fraction, *Cardiovascular Innovations and Applications* (2023). [DOI: 10.15212/CVIA.2023.0037](https://doi.org/10.15212/CVIA.2023.0037)

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