

Title: *Diabetes drug reduces heart disease burden*

For the first time, clinical researchers have found that a diabetes drug can reduce the death toll from cardiovascular problems among type 2 diabetes patients.

The drug, empagliflozin, is the third of a new class of diabetes drugs called sodium glucose-linked transporters (SGLT) inhibitors, to hit the market. Drugs in this family block the SGLT function, which would otherwise lead to the reabsorption of glucose into the kidney, and thus reduce glucose levels.

But the new findings, published online in the New England Journal of Medicine last September [in print in November], set empagliflozin apart.

“The results are spectacular since there has not been a mortality benefit seen with any drug for type 2 diabetes,” says William White, the chief of the Division of Hypertension and Clinical Pharmacology at the University of Connecticut School of Medicine. “The results are compelling,” agrees Deepak Bhatt, executive director of Interventional Cardiovascular Programs at Brigham and Women’s Hospital. “The reduction in mortality is impressive.”

Currently some 50% of type 2 diabetes patients die from cardiovascular disease. The study found that patients who took empagliflozin (sold as Jardiance by Boehringer Ingelheim and Eli Lilly and Company) had a 38% lower risk of cardiovascular-related death. Rates of hospitalization for heart problems and death from any cause also dropped significantly.

White says the results will potentially influence guidelines issued by diabetes organizations. That could give empagliflozin an edge over other diabetes drugs, like gliptins, and over its SGLT competitors in the market.

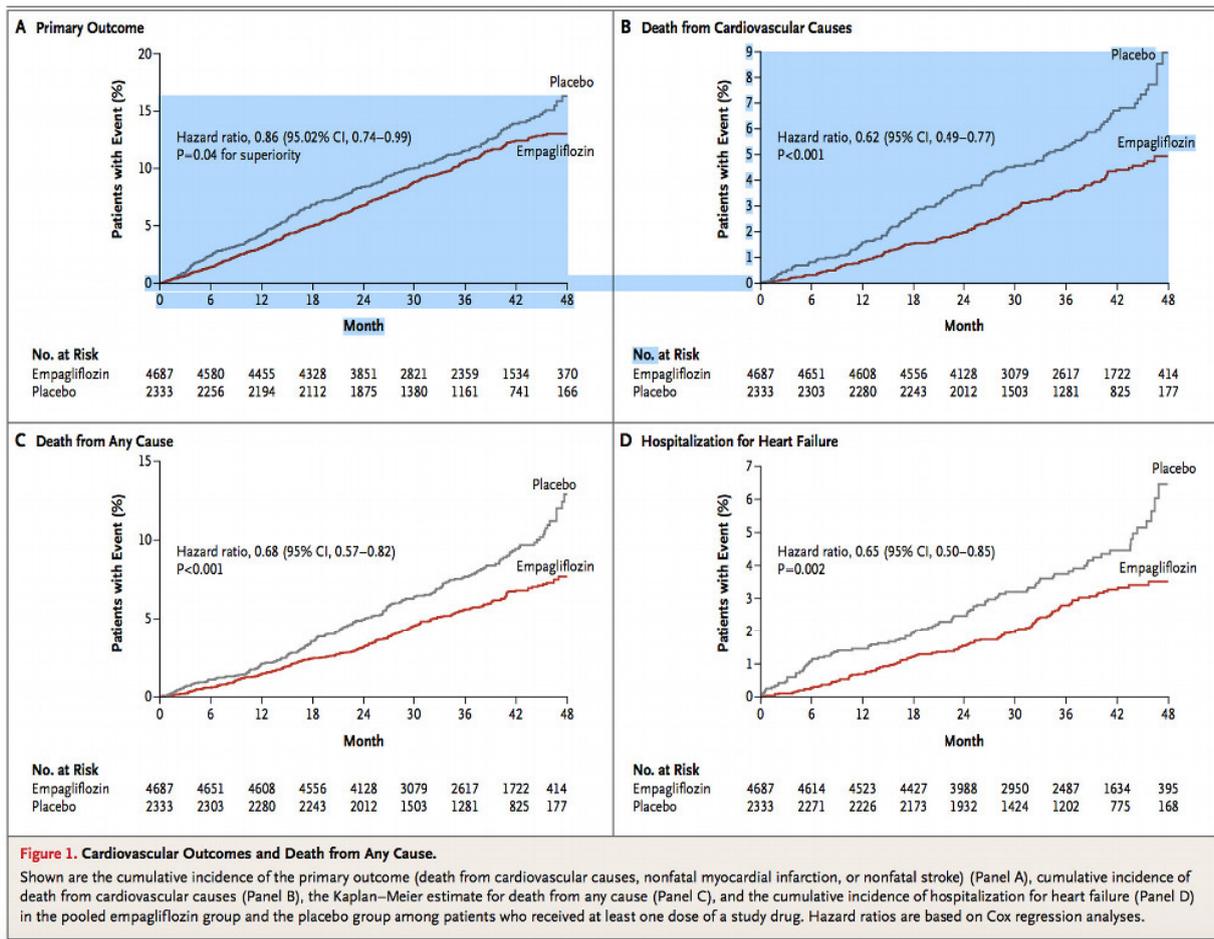
Whether other SGLT inhibitors will show the same benefit “is the huge question,” says White. The answer will come from ongoing studies on canagliflozin [NCT01032629; <https://clinicaltrials.gov/ct2/show/NCT01032629>] and dapagliflozin [NCT01730534; <https://clinicaltrials.gov/ct2/show/NCT01730534>]. But these results will not be ready until June 2017 and April 2019, respectively. In the meantime, physicians will have to make their best guess as to whether the effects are family-wide or specific to empagliflozin.

According to an Eli Lilly representative, quoting a January 5, 2016 guidance call on empagliflozin, “since the disclosure of the data we have seen some positive impact on sales and market share in certain markets.”

The study also raised some questions. Despite a reduction in systolic blood pressure in patients that took empagliflozin, rates of non-fatal stroke rate did not fall. The “perplexing finding” is something that could be cleared up in the next SGLT studies, says White.

Bhatt, who is involved in the dapagliflozin trial, says another critical question is how broadly the effect is seen. The current study showed benefit in patients with high cardiovascular risk. “Further studies will determine with drugs from this class reduce cardiovascular events in patients at a lower level of cardiovascular risk at baseline,” says Bhatt.

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Empagliflozin, Cardiovascular Outcomes, and Mortality in Type 2 Diabetes
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