Correlates and consequences of an acute decline in estimated glomerular filtration rate in response to the SGLT2 inhibitor dapagliflozin

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Presenting Author Disclosures
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References

Methods
Study design
DAPA-CKD was a randomized, double-blind, placebo-controlled trial.

Results
Change in eGFR from baseline to Week 2
Of the 4304 patients enrolled in the study, 4151 (96.6%) had eGFR data available at baseline and Week 2 and were included in this analysis. Overall, 1026 (49.4%) dapagliflozin patients and 494 (23.7%) placebo patients experienced an acute decline in eGFR of ≥10%. The distribution was similar when eGFR was categorized by absolute decline (Figure 1).

Baseline characteristics by percentage acute decline in eGFR

Treatment effect dapagliflozin vs placebo on acute decline in eGFR
Acute decline in eGFR with SGLT2 inhibitors has been shown to be reversible, reflecting favorable hemodynamic changes in the kidney.5

Conclusions
In the DAPA-CKD trial, acute declines in eGFR occurred more frequently with dapagliflozin than with placebo, and were generally consistent across patient subgroups.

Table 1: Baseline characteristics by percentage acute decline in eGFR

Table 2: Safety outcomes by acute decline in eGFR

Figure 1: Change in eGFR between baseline and Week 2
(A) By percentage decline (P value for interaction; Table 1)

Figure 2: Treatment effect of dapagliflozin vs placebo on acute decline in eGFR

Odds Ratio (95% CI) P Value for Interaction

Safety
The frequency of safety events was similar for dapagliflozin-treated patients regardless of degree of acute decline in eGFR, as assessed by percentage or absolute decline (Figure 1).

References

Conclusions
For dapagliflozin-treated patients, these acute declines were not associated with an increase in the severity of AEs, discontinuation due to AEs, or safety-related events or volume depletion events, regardless of the magnitude of the decline.

Safety outcomes were described for each category.

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Baseline characteristics by percentage acute decline are shown in Table 1. Findings were similar when assessed by absolute decline.

Treatment effect dapagliflozin vs placebo on acute decline in eGFR
The OR for an acute decline of ≥10% with dapagliflozin vs placebo was consistent across baseline subgroups of sex, eGFR, LAVPI, diabetes status, systolic blood pressure, BMI and cardiovascular disease history (Figure 2A).

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