DAPA-CKD: Dapagliflozin in Patients with Chronic Kidney Disease

Purpose: To assess whether treatment with dapagliflozin compared to placebo reduced risk of renal and cardiovascular events in patients with chronic kidney disease (CKD), with or without type 2 diabetes, and who are receiving standard of care including a maximum tolerated dose of an ACE inhibitor or ARB.

Trial Design: N= 4304, Phase 3, International, multicenter (386 centers in 21 countries), randomized, double blind, placebo-controlled study. All patients had estimated glomerular filtration rate (eGFR) ≥25 and ≤75 mL/min/1.73m2; urinary albumin to creatinine ratio between ≥200 mg/g and ≤5000 mg/g; and were on a stable, maximum tolerated dose of an ACE inhibitor or ARB (unless contraindicated) for at least four weeks.

Primary Endpoints: Composite outcome of sustained ≥50% decline in eGFR, end-stage kidney disease (ESKD), or renal or CV death.

Secondary Endpoints: 1) composite endpoint of worsening kidney function (defined as >50% sustained decline in eGFR or onset of end-stage kidney disease), or death from kidney failure; 2) a composite endpoint of hospitalization for heart failure or cardiovascular death; and 3) all-cause mortality.

	Dapagliflozin (N=2142)	Placebo (N=2147)	Hazard Ratio (95% CI)	P value
Sustained ≥50% eGFR decline, end-stage kidney disease, renal or CV death	n=197	n=312	HR=0.61 (95% CI 0.51-0.72)	P< 0.000001
• Sustained ≥50% eGFR decline, EKSD, renal death	n=243	n=142	• HR= 0.56 (95% CI 0.45-0.68)	P< 0.0001
• Hospitalization for heart failure or CV death	n=100	n=138	• HR=0.71 (95% CI 0.55-0.92)	p=0.0089
• All cause-mortality	n=101	n=146	• HR= 0.69 (95% CI 0.53-0.88)	p=0.0035

Results: In patients with CKD, with and without type 2 diabetes, dapagliflozin compared to placebo significantly

- Reduced the risk of kidney failure
- Reduced the risk of CV death or heart failure hospitalization
- Prolonged survival

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