Empagliflozin, a selective sodium glucose co-transporter 2 inhibitor, is indicated to improve glycemic control and reduce the risk of cardiovascular death in patients with type 2 diabetes and established cardiovascular disease. Hypothesis-generating results from the EMPA-REG OUTCOME Trial suggest that empagliflozin slows the progression of CKD. This manuscript presents the prespecified eGFR slope analysis from the trial, in which we evaluated changes in kidney function over time. Our results support a hemodynamic effect of empagliflozin, which may lead to reductions in intraglomerular pressure. During chronic maintenance treatment, this glomerular response to empagliflozin may translate into long-term preservation of kidney function. Our data add to the evidence of the utility of slope analysis as an emerging end point of CKD progression in clinical research.