

FLOW: Effects of Semaglutide on Chronic Kidney Disease in Patients with Type 2 Diabetes

BACKGROUND

- Despite improvements in kidney outcomes with available pharmacotherapies, the risk of kidney failure in people with CKD and T2D remains high^{1,2}
- FLOW is a dedicated kidney outcomes trial designed to determine the effects of semaglutide s.c. 1.0 mg on reducing progression of chronic kidney disease in participants with CKD and T2D, as well as assessing death due to kidney or cardiovascular causes³

STUDY DESIGN

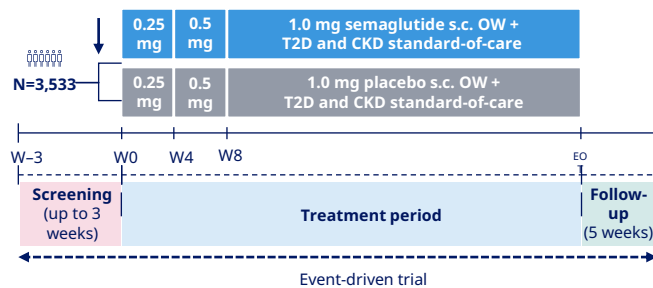
Randomized, double-blind, parallel-group, multinational phase 3b trial

387 trial locations and 28 countries

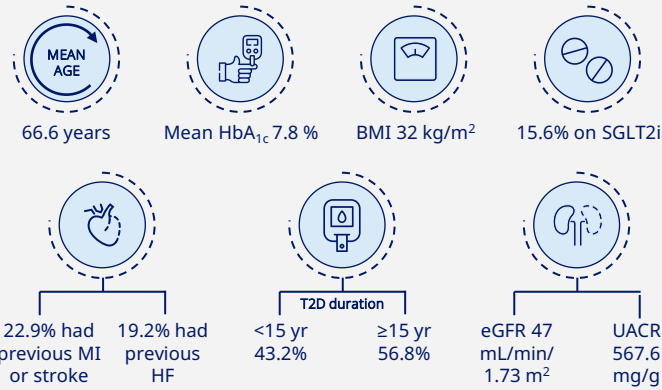
3533 participants

- Adults* with T2D and pre-existing CKD, HbA_{1c} ≤10 %
- eGFR ≥ 50 to ≤75 ml/min/1.73 m² and UACR >300 to <5000 mg/g or eGFR ≥ 25 to ≤50 ml/min/1.73 m² and UACR >100 to <5000 mg/g
- *>20 years in Japan

Randomization 1:1 (Stratified by sodium-glucose cotransporter-2 inhibitor use (yes/no).



BASELINE CHARACTERISTICS



People in FLOW had a substantial T2D burden: 48% with ≥7.5% HbA_{1c} and 57% had T2D for ≥15 years, and high comorbidity burden: 42% with prior MI or stroke, or chronic heart failure

CKD Status

According to KDIGO guideline categorization, 68.2% were at very high risk for CKD progression

		UACR categories (mg/g)		
		<30	≥30-<300	≥300
eGFR categories (mL/min/1.73 m ²)	≥90	1 (<0.1)	7 (0.2)	23 (0.6)
	≥60-<90	24 (0.7)	173 (4.9)	491 (13.9)
	≥45-<60	37 (1.0)	324 (9.2)	694 (19.6)
	≥30-<45	40 (1.1)	414 (11.7)	906 (25.6)
	≥15-<30	7 (0.2)	87 (2.5)	306 (8.6)

Risk categories: Low risk (n=25, 0.7%), Moderate risk (n=217, 6.1%), High risk (n=878, 24.8%), Very high risk (n=2,413, 68.2%)

COMPOSITE PRIMARY ENDPOINT

Time to first occurrence of a composite endpoint consisting of

- Onset of persistent ≥50% reduction in eGFR (CKD-EPI) versus baseline
- Onset of kidney failure, defined as initiation of CKRT (dialysis or kidney transplantation) or persistent eGFR <15 ml/min/1.73 m² for at least 4 weeks
- Death from kidney failure
- CV death

SUMMARY



FLOW has assessed the impact of injectable s.c OW semaglutide 1 mg on kidney outcomes in individuals with chronic kidney disease and T2D, and the findings have recently been published⁴.

BMI, body mass index; CKD, chronic kidney disease; CVD, cardiovascular disease; eGFR, estimated glomerular filtration rate; GLP-1RA, glucagon-like peptide-1 receptor agonist; HbA_{1c}, glycated hemoglobin; OW, once weekly; s.c; sub cutaneous; SGLT2i, Sodium-glucose cotransporter 2 inhibitor; T2D, type 2 diabetes; UACR, urine albumin creatinine ratio
 1. Perkovic V et al. N Engl J Med 2019;380(24):2295-306; 2. Heerspink HJL et al. N Engl J Med 2020;383(15):1436-46. 3. Rossing P et al. Nephrol Dial Transplant. 2023;38(9):2041-2051; 4. Perkovic V, et al. N Engl J Med. 2024; DOI: 10.1056/NEJMoa2403347

