

Supplementary information

Next-generation therapeutics for diabetic kidney disease

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Supplementary table 1 | Ongoing Phase 2 and 3 trial of therapies for DKD in patients with T1DM or T2DM

Clinical trial	Phase (status)	Population	Objective	Primary outcome	Ref
RT1D (NCT05822609)	Phase 2 (recruiting, estimated completion Jun 2026)	T1DM for ≥ 5 years, uACR ≥ 30 mg/g and eGFR ≥ 45 mL/min/1.73m ²	Investigate the effects of semaglutide versus placebo on kidney oxygenation and function in T1DM	Change in kidney oxygenation measured by MRI from baseline to 26 weeks	¹
SugarNSalt (NCT06217302)	Phase 3 (recruiting, estimated completion Feb 2027)	T1DM for ≥ 8 years and DKD (eGFR 20-60 mL/min/1.73m ² and uACR ≥ 200 mg/g)	Investigate the effectiveness and safety of sotagliflozin versus placebo for slowing kidney function decline in people with T1DM and moderate to severe DKD	eGFR at end of an 8-week drug washout period following a 3-year treatment period	²
FINE ONE (NCT05901831)	Phase 3 (not recruiting, estimated completion Sep 2025)	Adults with T1DM and CKD (eGFR ≥ 25 and < 90 mL/min/1.73 m ² using CKD-EPI 2009 formula and uACR ≥ 200 mg/g to < 5000 mg/g)	Investigate the efficacy and safety of finerenone versus placebo, in addition to standard care, in people with CKD and T1DM	Change in UACR from baseline to 6 months	³
PLUTO (NCT06147232)	Phase 2 (not yet recruiting, estimated completion May 2027)	Adults with T1DM and DKD (eGFR 25-75 mL/min/1.73m ² and uACR > 100 mg/g)	Investigate the effectiveness of Sotagliflozin (SGLT1 and 2 inhibitor) versus placebo, on renal oxygenation in persons with T1DM and CKD	Change in dynamic R2*-weighted signal* between 0 and 12 weeks after treatment	⁴
REGEN-007 (NCT05018416)	Phase 2 (not recruiting, estimated completion Sep 2026)	Adults aged 30-80 years with T1DM or T2DM and DKD (eGFR 20-50 mL/min/1.73m ²)	Investigate the safety, efficacy, and durability of up to two REACT injections delivered percutaneously into biopsied and non-biopsied contralateral kidneys on renal function progression in patients with T1DM or T2DM and CKD	eGFR slope	⁵
REGEN-006 (NCT05099770)	Phase 3 (recruiting, estimated completion Feb 2027)	Adults aged 30-80 years with T2DM and DKD (eGFR 20-30 mL/min/1.73m ² and uACR < 5000 mg/g; or	Investigate the safety and efficacy (including durability) of up to 2 REACT injections given 3 months (+30 days) apart	Time from first injection to the earliest of $\geq 40\%$ reduction in eGFR [†] sustained for 30 days or eGFR < 15 mL/min/1.73m ^{2†} sustained	⁶

		eGFR 30-35 ml/min/1.73m ² and uACR 300-5000 mg/g)	and delivered percutaneously into biopsied and non-biopsied contralateral kidneys (versus sham procedure) in participants with T2D and CKD	for 30 days and/or chronic dialysis, and/or renal transplant or renal or cardiovascular death	
Kidney ABC (NCT06600412)	Phase 2 (recruiting, estimated completion Aug 2025)	Adults with T2DM, uACR 30-5000 mg/g and eGFR >30 ml/min/1.73m ²	Investigate if R3R01 (an ATP-binding cassette transporter A1) has a beneficial effect on uACR in patients with T2DM and DKD	Change in uACR from baseline to end of treatment (12 weeks)	⁷
REMODEL (NCT04865770)	Phase 3 (completed, awaiting results)	Adults with T2DM and CKD (if not biopsied, eGFR 30-75 ml/min/1.73m ² or if biopsied, eGFR 40-75 ml/min/1.73m ²)	Investigate the kidney specific mode of action for semaglutide SC versus placebo in people with T2DM and CKD.	MRI-based measures of changes in kidney oxygenation, global kidney perfusion, inflammation and fibrosis from baseline to end of treatment (week 52)	⁸
NCT05936151	Phase 2b (recruiting, estimated completion Nov 2025)	People with or without T2DM, BMI ≥27.0 kg/m ² and CKD	Investigate the effect of retatrutide (a triple-hormone-receptor agonist against glucose-dependent insulintropic polypeptide, GLP1 and glucagon receptors) SC versus placebo on renal function in participants with overweight or obesity and CKD with or without T2DM	Change in GFR in ml/min/1.73m ² using iohexol clearance between baseline and week 24	⁹
TREASURE-CKD (NCT05536804)	Phase 2 (recruiting, estimated completion Feb 2026)	People with or without T2DM, BMI ≥27.0 kg/m ² and CKD (eGFR 25-60 ml/min/1.73m ² or eGFR 25-75 ml/min/1.73m ² and uACR >30 mg/g)	Investigate the effect of tirzepatide (a gastric inhibitory polypeptide analog and GLP1 receptor agonist) SC versus placebo, on kidney hypoxia in participants with overweight or obesity and CKD with or without T2DM	Change in kidney oxygenation between baseline and week 52, measured by BOLD MRI	¹⁰
EASi-KIDNEY (NCT06531824)	Phase 3 (recruiting, estimated completion Aug 2028)	Adults with or without T2DM with CKD at risk of progression (eGFR 20-45 ml/min/1.73m ² or eGFR 45-90	Investigate the renoprotective effect of vicirostat (an aldosterone synthase inhibitor) in combination with empagliflozin, in	Time to first occurrence of the primary composite outcome of kidney disease progression (kidney failure or a sustained decline in eGFR of ≥40%) or hospitalization	¹¹

		ml/min/1.73m ² and uACR ≥200 mg/g)	participants with CKD with or without T2DM	for heart failure or cardiovascular death	
AFFINITY (NCT04573920)	Phase 2 (not recruiting, estimated completion Jul 2026)	T2DM and DKD (eGFR ≥ 45 ml/min/1.73m ² AND uACR ≥ 0.5 g/g).	Investigate the efficacy and safety of oral atrasentan (a ERA) in patients with DKD	Change in UACR from baseline to week 12	¹²

*An indirect measure of renal blood oxygenation. † 2009 CKD-EPI serum creatinine equation. CKD-EPI, Chronic Kidney Disease Epidemiology Collaboration; ERA, endothelin receptor antagonist; REACT, renal autologous cell therapy; T1DM, type 1 diabetes mellitus; T2DM, type 2 diabetes mellitus; UACR, urinary albumin-to-creatinine ratio.

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