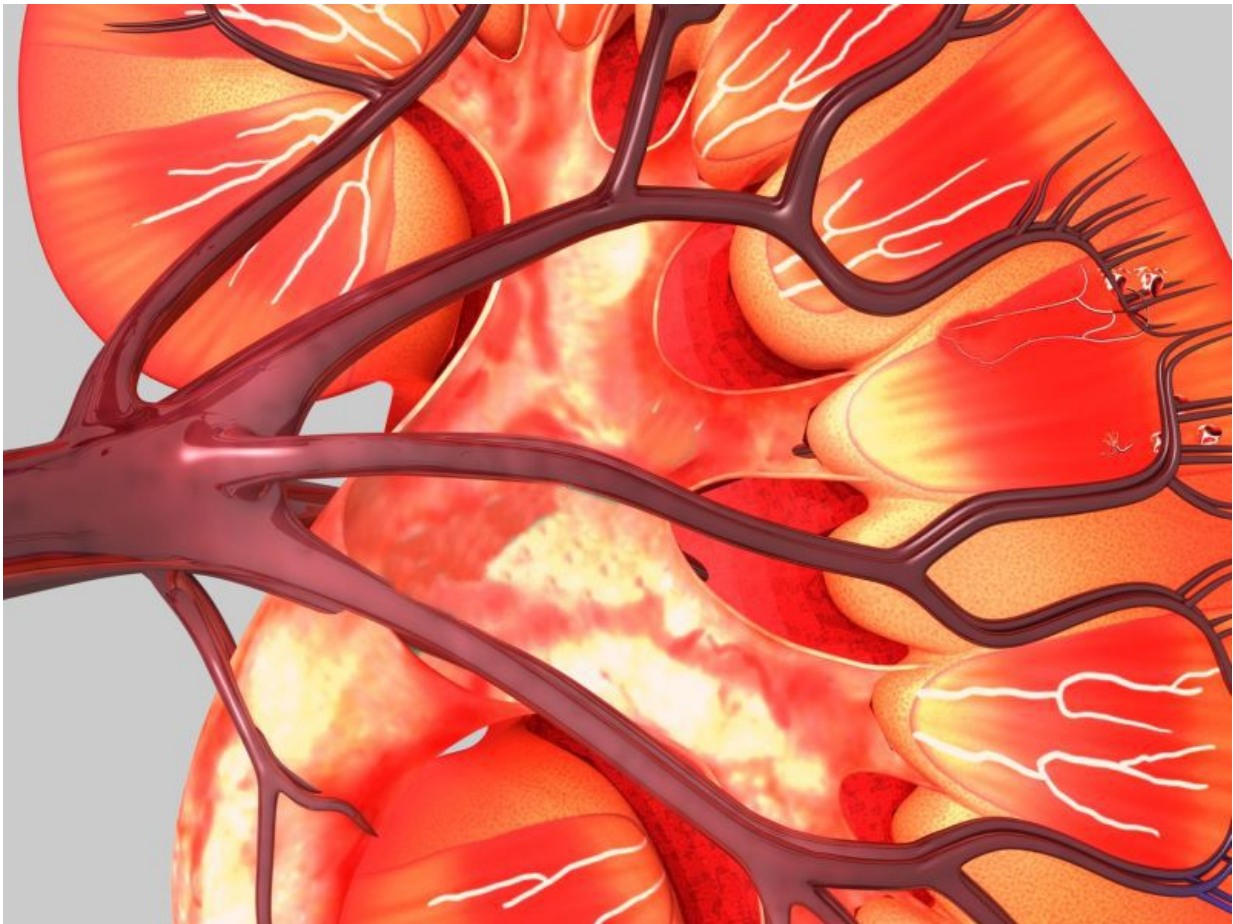


# Metabolites linked to renal decline, time to ESRD in T1DM

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(HealthDay)—Serum levels of seven modified metabolites are

associated with renal function decline and time to end-stage renal disease (ESRD) among patients with type 1 diabetes (T1D), according to a study published online Jan. 13 in *Diabetes Care*.

Monika A. Niewczas, M.D., Ph.D., from the Joslin Diabetes Center in Boston, and colleagues examined serum metabolomic profiles associated with variation in renal function decline in 158 patients with T1D with proteinuria and chronic kidney disease stage 3. Participants were followed for 11 years to determine the estimated [glomerular filtration rate](#) slopes and to ascertain time to ESRD onset.

The researchers detected 110 amino acids and purine and pyrimidine metabolites in at least 80 percent of participants. There was an association for serum [levels](#) of seven modified metabolites (C-glycosyltryptophan, pseudouridine, O-sulfotyrosine, N-acetylthreonine, N-acetylserine, N6-carbamoylthreonyladenine, and N6-acetyllysine) with renal function decline and time to ESRD (P "This prospective cohort study in participants with T1D, proteinuria, and impaired renal function at baseline demonstrated that patients with increased circulating levels of certain modified metabolites experience faster [renal function](#) decline, leading to ESRD," the authors write. "Whether some of these candidate metabolites are risk factors or just prognostic biomarkers of progression to ESRD in T1D needs to be determined."

**More information:** [Full Text \(subscription or payment may be required\)](#)

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