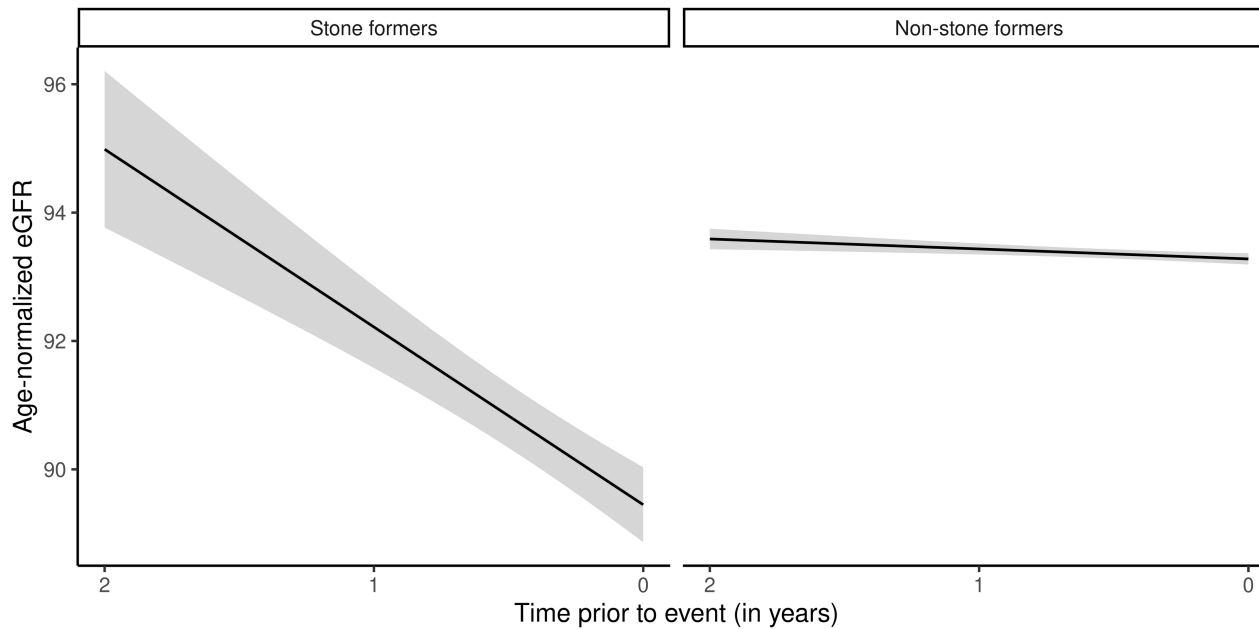




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Association of Urinary Stone Disease with Kidney Function Decline

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Rate of eGFR decline	Stone Formers (95% CI)	Non-Stone Formers (95% CI)	P-value
Linear model using age-normalized eGFR (ml/min/1.73 m ² per year)	-2.77 (-3.39, -2.14)	-0.16 (-0.25, -0.06)	< 0.001
Linear model using eGFR – fully adjusted* (ml/min/1.73 m ² per year)	-2.65 (-3.27, -2.04)	-0.02 (-0.12, 0.07)	< 0.001
* Adjusted for age, BMI, gender, race, smoking history, diabetes, and hypertension			

Insights

Stone Formers have a significant eGFR decline up to 2 years prior to acute stone event

Declining eGFR is an independent risk factor for first acute stone event

The findings are suggestive of upstream changes in papilla being associated with stone formation. Intervention after the acute stone event ultimately needs to address upstream changes in the renal papilla to help reduce the high recurrence rates seen by patients.