

# Plasma Oxalate Concentration and Patients With CKD



**To the Editor:** In the recent article by Pfau *et al.*,<sup>1</sup> “Assessment of Plasma Oxalate Concentration in Patients With CKD,” they reported a new simple procedure for evaluating plasma oxalate (POx) concentration that enabled the investigation of a large cohort of patients with chronic kidney disease (CKD).<sup>1</sup> They measured POx in 1826 patients with CKD and found stable results; furthermore, they reaffirmed a negative correlation between the estimated glomerular filtration rate and POx.

Recent studies using dual-energy computed tomography angiography have reported that calcium oxalate is one of the main components of coronary artery calcification,<sup>2,3</sup> which affects the survival rate of patients with CKD. We are interested in the effects of high POx levels, especially in patients who are undergoing dialysis, and the methods to suppress these effects.<sup>4</sup>

We think this new method may contribute to future research in this area; however, some limitations remain. For instance, they described the correlation between the estimated glomerular filtration rate and POx, but they did not show a regression line in the scatterplot or present a correlation coefficient for the data or its *P* value. We hoped the authors would present this information, because this figure may be cited widely.

We recognize that this study is a part of an ongoing prospective, large-cohort study. Therefore, we hope that the authors clarify the role of POx not only in CKD progression but also in the progression of coronary artery calcification in the future.

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4. Oka Y, Miyazaki M, Matsuda H. Do calcium-based phosphate binders accelerate or prevent coronary artery calcification in dialysis patients? *Ther Apher Dial.* 2018;23:195–196.

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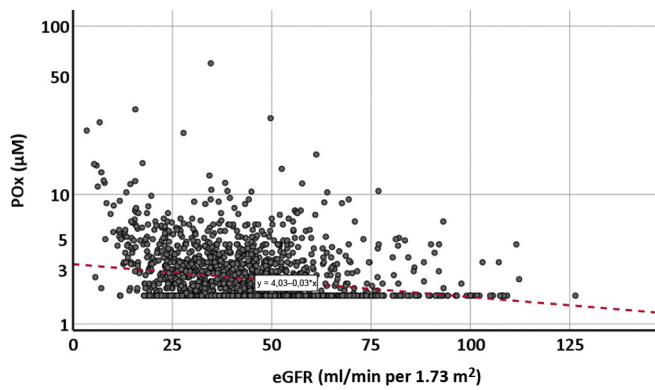
# Author Reply to Comment on “Assessment of Plasma Oxalate Concentration in Patients With CKD” by Oka *et al.*



**The Author Replies:** We thank Oka *et al.* for the precise summary of our study “Assessment of plasma oxalate concentration in patients with CKD”<sup>1</sup> and their excellent suggestions for future investigations. As proposed, we added a regression line to the scatter plot that illustrates the correlation between estimated glomerular filtration rate and plasma oxalate concentration (**Figure 1**) with the correlation coefficient *r* being  $-0.22$  (Spearman correlation;  $P < 0.001$ ).

The pathophysiological role of oxalate in chronic kidney disease and its potential impact on clinical outcomes have not been addressed by our study. We agree with Oka *et al.* that it is worth widening our view on the role of plasma oxalate concentrations. Therefore, further analyses will not only focus on renal endpoints such as progression of kidney disease<sup>2</sup> or graft survival,<sup>3</sup> but also on cardiovascular outcomes.<sup>4</sup>

1. Pfau A, Wytopil M, Chauhan K, et al. Assessment of plasma oxalate concentration in patients with CKD. *Kidney Int Rep.* 2020;5:2013–2020.



**Figure 1.** Plasma oxalate concentrations (POx) and corresponding estimated glomerular filtration rate (eGFR) in 1826 patients with chronic kidney disease (German Chronic Kidney Disease = GCKD study population). POx were measured in 1826 patients of the GCKD study and plotted against the corresponding calculated eGFR. The y-axis is log-scaled. The red dashed line represents the regression line (Spearman correlation:  $r = -0.22$ ,  $P < 0.001$ ).

2. Waikar SS, Srivastava A, Palsson R, et al. Association of urinary oxalate excretion with the risk of chronic kidney disease progression. *JAMA Intern Med.* 2019;179:542–551.
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