



COMMENT ON CHAN ET AL.

FGF23 Concentration and *APOL1* Genotype Are Novel Predictors of Mortality in African Americans With Type 2 Diabetes. *Diabetes Care* 2018;41:178–186

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We read with great interest the article by Chan et al. (1) demonstrating that fibroblast growth factor 23 (FGF23) concentration is a novel predictor of mortality in African Americans with type 2 diabetes. FGF23 is the main hormone mediating serum phosphorus concentration through inhibiting tubular reabsorption of phosphorus from the urine (2). Meanwhile, serum phosphorus is the main stimulus for FGF23 secretion. In progressive chronic kidney disease (CKD), both serum FGF23 and phosphorus concentrations are increased because of reduced tubular klotho expression, which is the indispensable factor in the mechanism of FGF23-mediated phosphorus lowering (2). Therefore, serum phosphorus level is parallel with FGF23 in early CKD.

As Chan et al. (1) described in their article, cardiovascular and renal complications contribute to higher mortality in patients with diabetes, which may be associated with ectopic calcification due to an imbalance of calcium-phosphorus

metabolism in CKD, like arterial calcification. Actually, increased serum phosphorus and calcium-phosphorus product have been proven as novel predictors of ectopic calcification (3,4). In addition, Sheridan and Logomarsino (5) conducted a systematic review of the literature including 10 cross-sectional studies to investigate the association of serum phosphorus with vascular calcification in healthy adult populations. Of the 10 studies located, 8 indicated an association between serum phosphorus and vascular calcification (5). Therefore, serum phosphorus concentration is a novel predictor of vascular calcification both in patients with CKD and the healthy population.

Compared with FGF23 concentration, serum phosphorus and calcium-phosphorus product are available more conveniently and with lower cost in clinical practice. Therefore, even more than FGF23, we wonder why Chan et al. did not investigate the association between serum phosphorus and calcium-phosphorus product and

mortality, and whether they have similar predictive value of mortality in African Americans.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

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