

## **SIGNIFICANCE STATEMENT**

Fibroblast growth factor 23 (FGF23), a bone-derived hormone that regulates phosphorus and vitamin D metabolism, contributes to the pathogenesis of mineral and bone disorders in CKD and is an emerging cardiovascular risk factor. The authors performed a meta-analysis of genome-wide association studies of circulating FGF23 concentrations among 16,624 individuals of European ancestry from seven cohort studies. After adjusting for age, sex, study site, and principal components of ancestry, they found that common genetic variants are associated with differences in circulating FGF23 concentration; several are closely linked with enzymes, transporters, and receptors known to be critical to vitamin D metabolism and regulation of phosphate levels. Future study of such variants may help illuminate the mechanism and clinical implications of FGF23's role in vitamin D and phosphate homeostasis.