



Supplemental Fig. S3. Genome-wide association of circulating 25-hydroxyvitamin D concentrations with chromosome positions, $-\log_{10} P$ value (Manhattan plot), and quantile-quantile plots (QQ-plots) for (A) mega-analysis and (B) meta-analysis and logistic regression (<10 , <20 ng/mL). (A) rs4588 ($P=5.33E-10$) for vitamin D (<10 ng/mL) and rs4588 ($P<0.00E-30$) for vitamin D (<20 ng/mL). (B) rs4588 ($P=3.2E-10$, $Z\text{-score}=6.29$) for vitamin D (<10 ng/mL), and rs4588 ($P=1.9E-19$, $Z\text{-score}=9.03$) for vitamin D (<20 ng/mL).