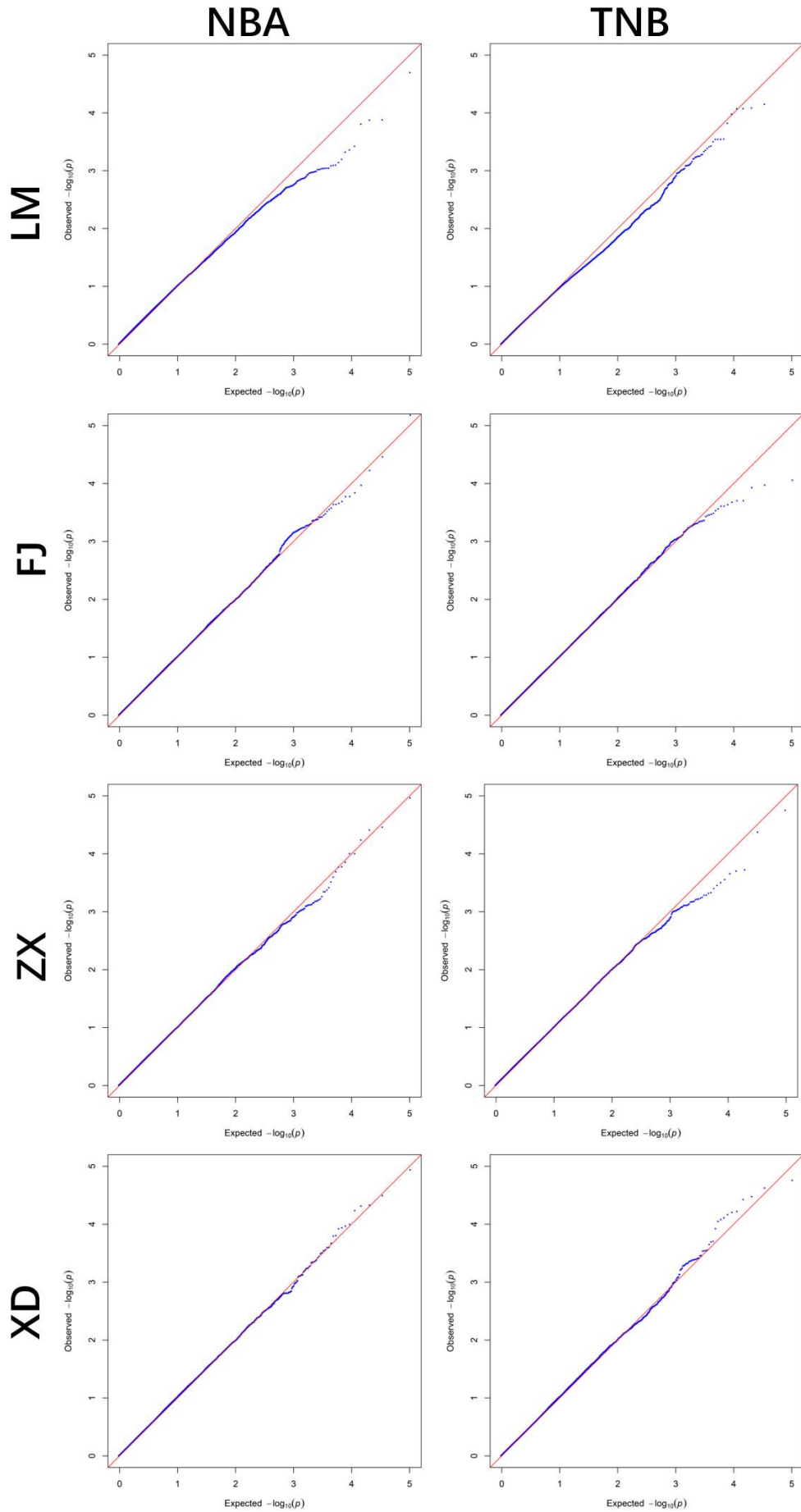


**Supplemental Figure S1.** Manhattan plot of single trait GWAS for TNB and NBA in four populations. The  $x$ -axis represents the chromosomes and the  $y$ -axis represents the  $-\log_{10}(p\text{-value})$ . The dotted line indicates the significance threshold of genome-wide level for GWAS. TNB, total number born; NBA number born alive.



**Supplemental Figure S2.** Q-Q plots of NBA and TNB in four populations. The  $x$ -axis and the  $y$ -axis represent the expected and observed  $-\log_{10}(\text{p-value})$ . TNB, total number born; NBA number born alive.