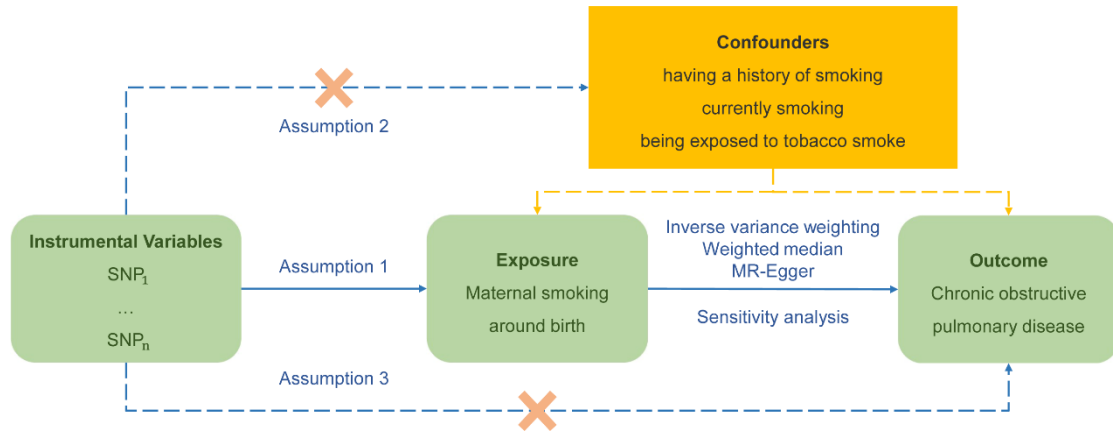


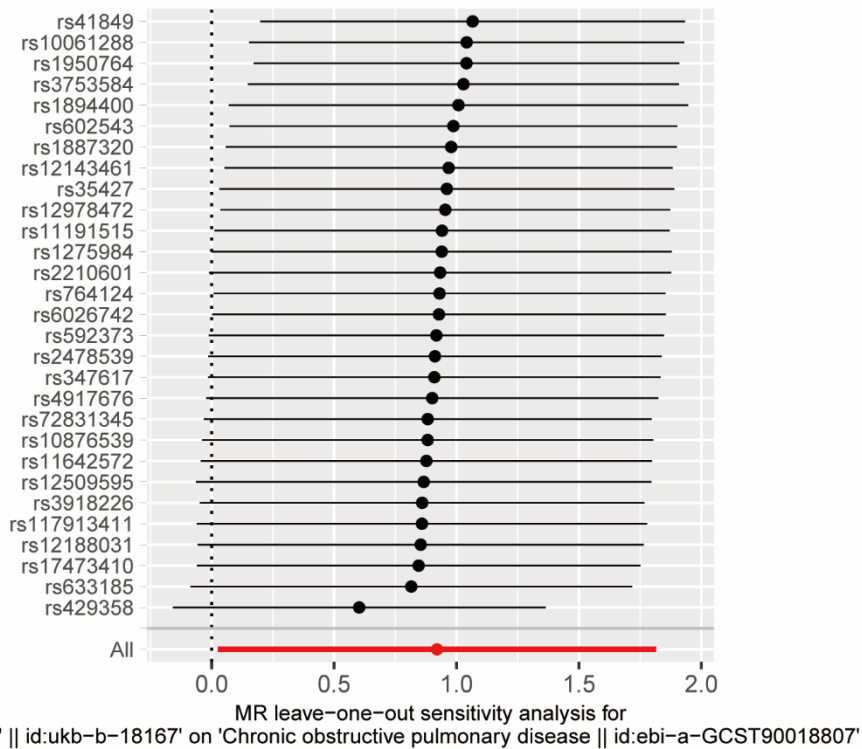
**Supplementary materials**

**Figure S1** Fundamental assumptions of MR.



Assumption 1: Genetic variations must be strongly associated with the exposure; Assumption 2: Genetic variations should be independent of potential confounders; (3) Assumption 3: Genetic variations influence the outcome solely through the exposure, without alternative pathways

**Figure S2** MR leave-one-out sensitivity analysis of maternal high blood pressure on COPD in offspring.



**Figure S3** MR leave-one-out sensitivity analysis of maternal heart disease on COPD in offspring.

