

## **Supplementary table information**

**Supplementary Table 1:** Summary results of intestinal microbiota related to AA and its subtypes

**Supplementary Table 2:** Characteristics of SNPs used for gut microbiome in MR analyses  
( $P < 1 \times 10^{-5}$ )

**Supplementary Table 3:** Summary result of the characteristics of the genetic instrumental variables

**Supplementary Table 4:** Meaningful result of reverse causality relationship

**Supplementary Table 5:** Characteristics of the genetic instrumental variables searched by PhenoScanner V2