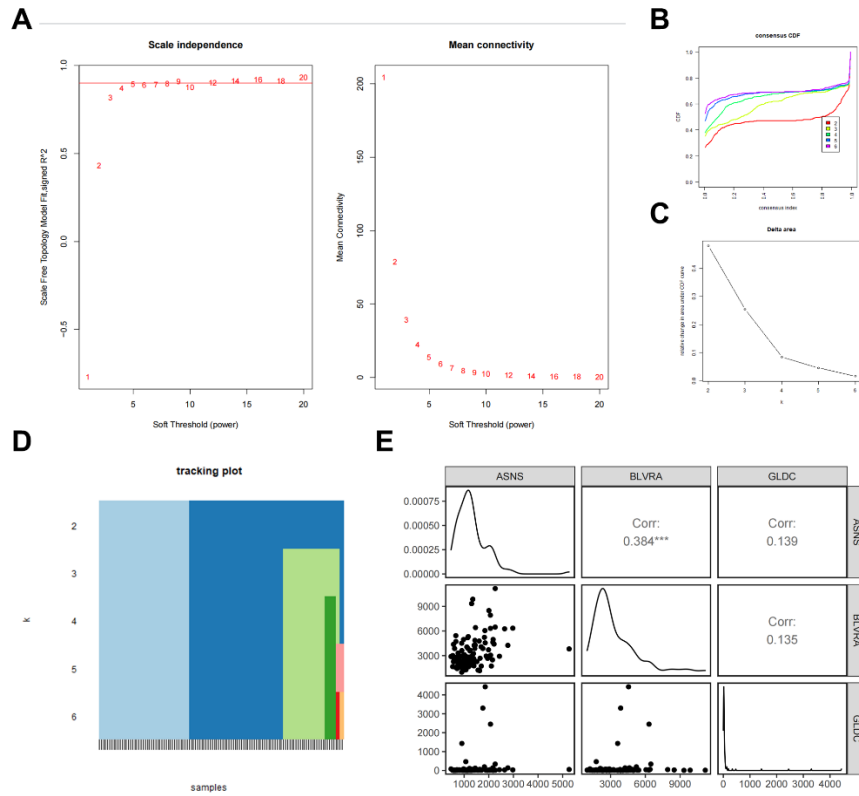
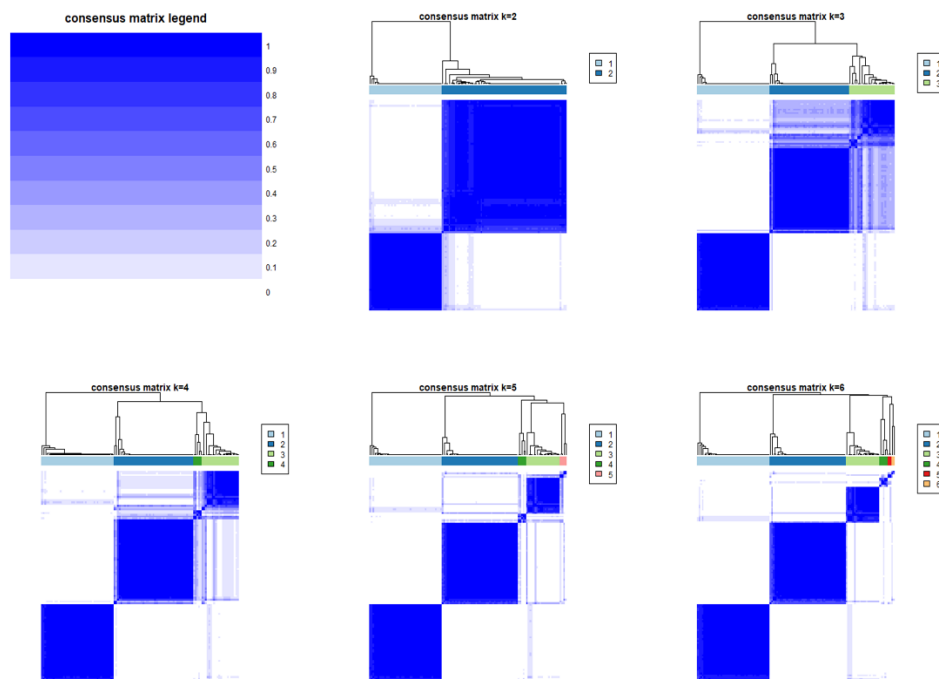


**Figure S1.** Volcano diagram revealing changes between the thymomas (A) or TCs (C) and ANTs; enrichment pathways of differential metabolic features between thymomas (B) or TCs (D) and ANTs (pathways with  $p < 0.05$  were annotated)



**Figure S2.** (A) A power of  $\beta = 4$  (scale-free  $R^2 = 0.87$ ) was selected as the soft threshold in WGCNA; (B–D): The proportion of expression similarity and ambiguous clustering measures for the 137 TP-MRGs in consensus clustering; (E) Correlation analysis showed no collinear expression existed.



**Figure S3.** (A) The proportion of expression similarity and ambiguous clustering measures for the 137 TP-MRGs in consensus clustering.

