

**Figure S1** Scatter plot of the MR analysis of the causal associations between the 39 candidate exposure factors and PC. MR, Mendelian randomization; SNP, single nucleotide polymorphism; PC, pancreatic cancer.



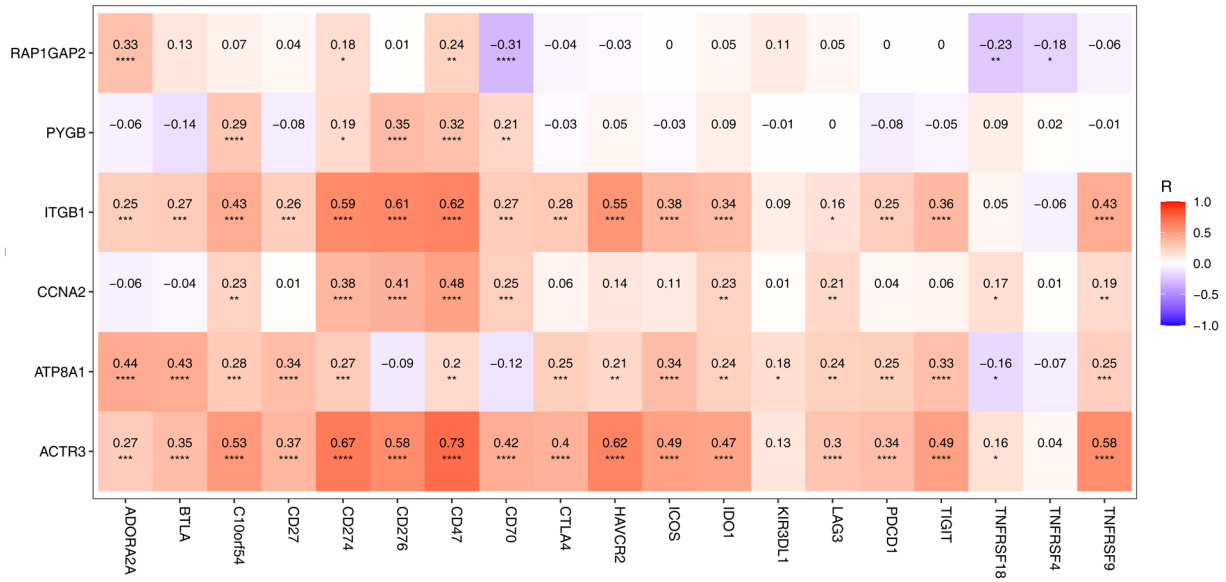
**Figure S2** Forest plot of the MR analysis of the causal associations between the 39 candidate exposure factors and PC. MR, Mendelian randomization; PC, pancreatic cancer.



**Figure S3** Funnel plot of the MR analysis of the causal associations between the 39 candidate exposure factors and PC. MR, Mendelian randomization; SE, standard error; IV, inverse variance; PC, pancreatic cancer.



**Figure S4** Forest plot of the LOO test for the sensitivity analysis of the 39 candidate exposure factors. LOO, leave-one-out.



**Figure S5** Bubble map of differential expression of immune checkpoint and prognostic gene correlation. Abscissa: correlation coefficient; ordinate: differential immune checkpoints; color indicates salience, with darker red indicating greater salience. \*, P<0.05; \*\*, P<0.01; \*\*\*, P<0.001; \*\*\*\*, P<0.0001.