

**Table S1.** Basic characteristics of subjects in PE and GH group.

Variable	Control (n=35)	Case	
		GH (n=20)	PE (n=15)
Age (year)	31.26±3.94	29.95±3.53	33.73±4.01 <sup>#*</sup>
Gestational age (week)	12.70±0.86	13.49±4.28	12.69±0.80
Race			
Han	33(94.3%)	19(95.0%)	15(100.0%)
Others	2(5.7%)	1(5.0%)	0(0.0%)
Occupation			
Professionals	9(25.7%)	6(30.0%)	2(13.3%)
Company employee	14(40.0%)	10(50.0%)	5(33.3%)
Others	12(34.3%)	4(20.0%)	8(53.3%)
Education			
Junior college and below	18(51.4%)	7(35.0%)	7(46.7%)
Undergraduate and above	17(48.6%)	13(65.0%)	8(53.3%)
Monthly income			
10000 and below	18(51.4%)	10(50.0%)	12(80.0%)
10000 and above	17(48.6%)	10(50.0%)	3(20.0%)

<sup>#</sup>: Means there was statistics difference between GH and PE group ( $p < 0.05$ ).

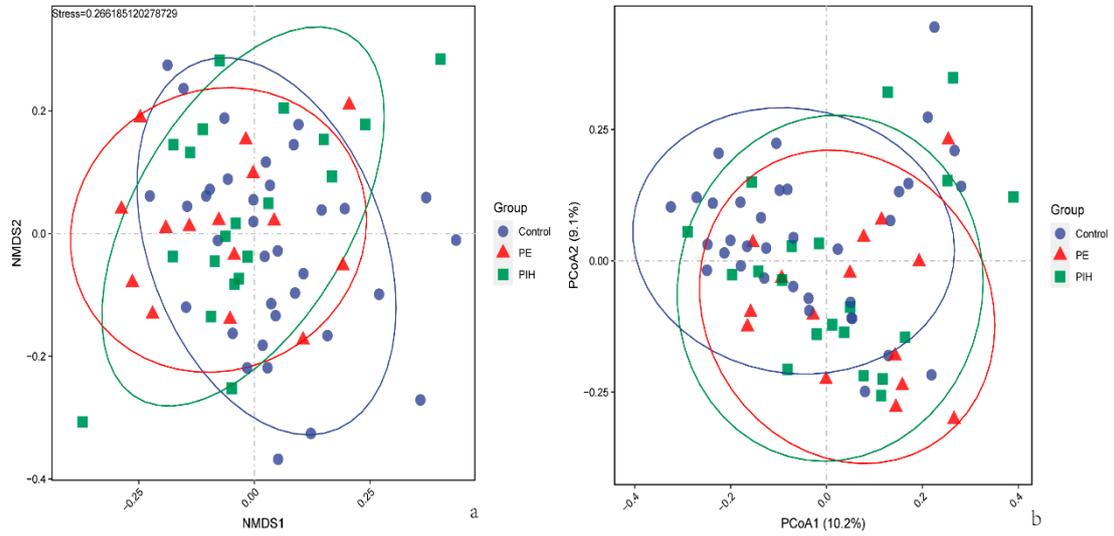
<sup>\*</sup>: Means there was statistics difference between subgroup and control group ( $p < 0.05$ ).

**Table S2.** Clinical characteristics of subjects in PE and GH group.

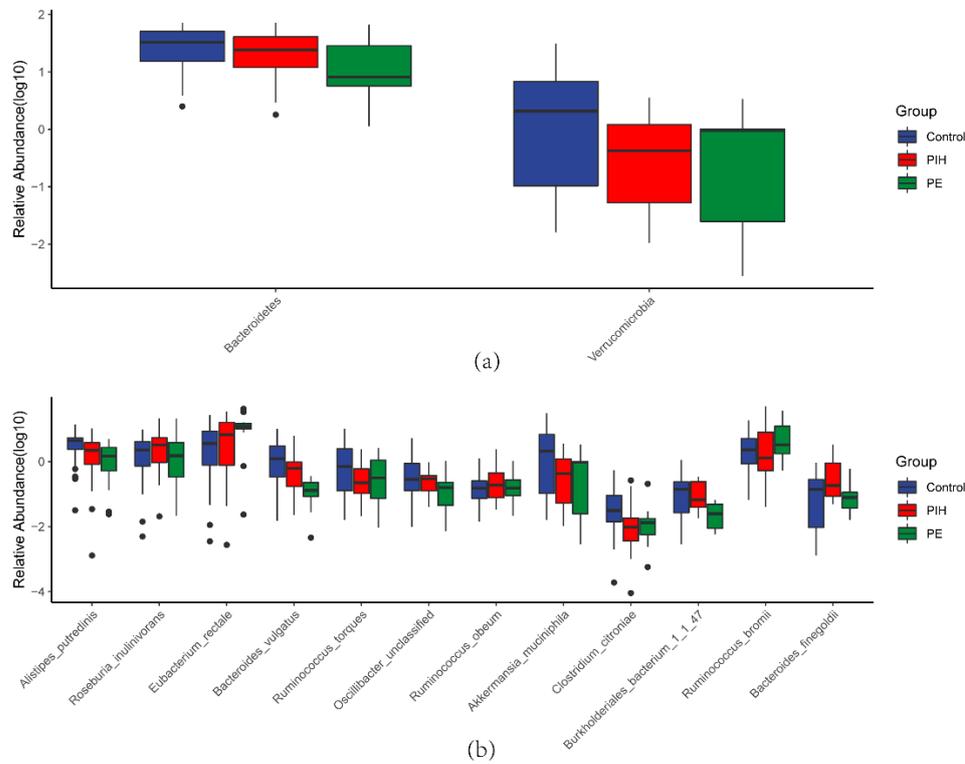
Variable	Control (n=35)	Case	
		GH (n=20)	PE (n=15)
Early waist (cm)	79.47±7.01	80.49±7.56	84.65±10.58
Early BMI (kg/m <sup>2</sup> )	21.80±2.20	22.49±3.48	24.32±3.49 <sup>*</sup>
Early SBP (mmHg)	114.77±9.54	124.95±7.55 <sup>*</sup>	125.20±8.43 <sup>*</sup>
Early DBP (mmHg)	73.49±8.46	80.65±7.10 <sup>*</sup>	83.20±7.50 <sup>*</sup>
HGB (g/L)	122.71±10.51	127.78±6.89	127.37±7.98
GLU (mmol/L)	4.52±0.39	4.68±0.55	4.76±0.34
ALB (g/L)	45.84±2.26	45.48±2.16	44.33±2.79
ALT (U/L)	17.57±10.54	21.08±18.48	24.95±13.07
AST (U/L)	18.46±5.48	20.24±7.99	22.82±8.40
CREA (umol/L)	43.23±8.16	43.15±6.28	45.35±8.83
UA (umol/L)	197.89±38.93	219.35±50.49	245.64±56.72 <sup>*</sup>
UREA (mmol/L)	2.50±0.55	2.66±0.90	2.56±0.59
TG (mmol/L)	1.42±0.40	1.48±0.64	1.92±0.60 <sup>*</sup>
TCHOL (mmol/L)	4.74±0.86	4.85±0.89	4.27±0.82
HDLCH (mmol/L)	1.89±0.39	2.06±0.41	1.68±0.38
LDLCH (mmol/L)	2.74±0.78	2.69±0.82	2.35±0.47
hsCRP (mg/L)	3.86±4.20	3.92±2.86	6.32±6.80
INS (mU/L)	19.19±31.74	36.88±46.85	56.49±74.45 <sup>*</sup>
GGT (U/L)	13.57±5.79	19.62±17.59	25.86±15.88 <sup>*</sup>

<sup>\*</sup>: Means there was statistics difference between subgroup and control group ( $p < 0.05$ ).

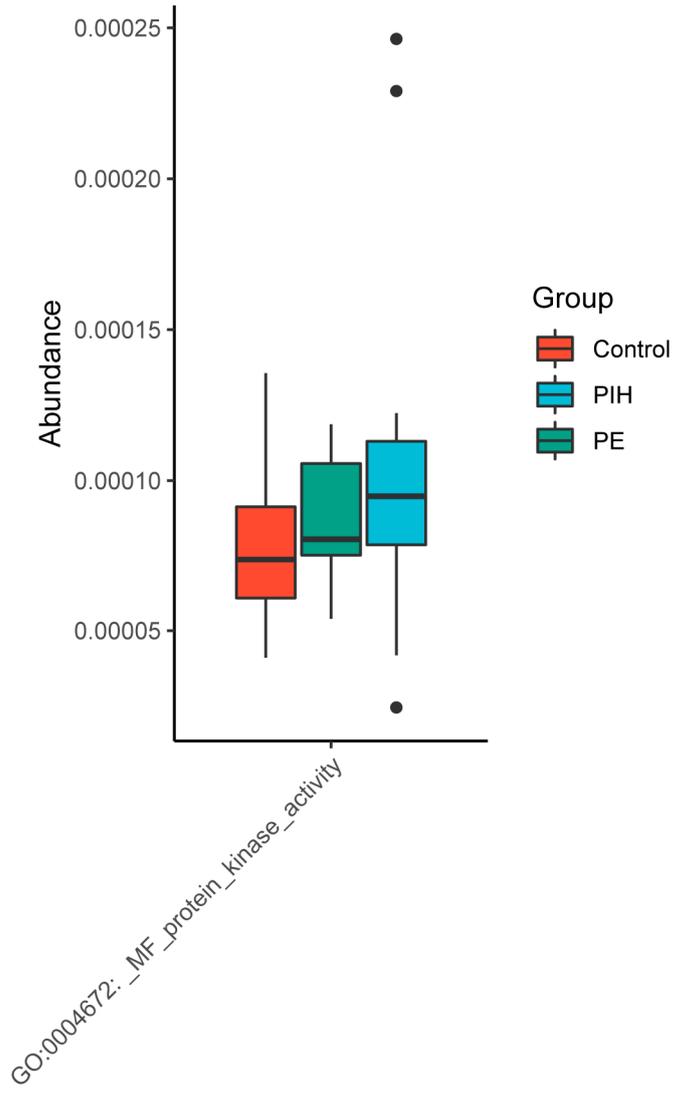
BMI, body mass index; SBP, systolic blood pressure; DBP, diastolic blood pressure; HGB, hemoglobin; ALB, albumin; ALT, glutamic pyruvic transaminase; AST, glutamic oxalacetic transaminase; CREA, creatinine; UA, uric acid; TG, triglyceride; TCHOL, total cholesterol; HDLCH, high density lipoprotein cholesterol; LDLCH, low density lipoprotein cholesterol; hsCRP, hypersensitive C-reactive protein; INS, insulin; GGT, glutamyltransferase.



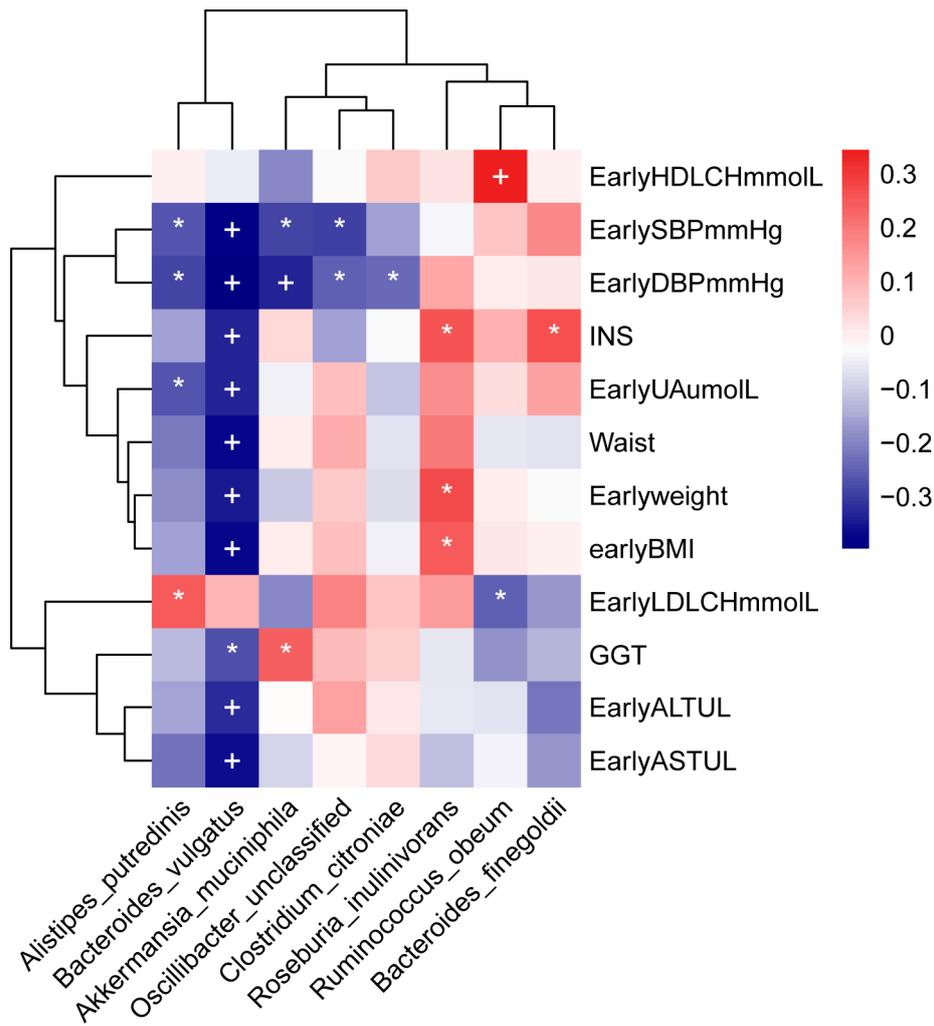
**Figure S1.** The beta diversity of subgroup and healthy controls. (a) NMDS analysis in three groups. (b) PCoA analysis in three groups.



**Figure S2.** Boxplot of different microbial taxa. (A) Different phylum level taxa in three groups. (B) Different species level taxa in three groups.

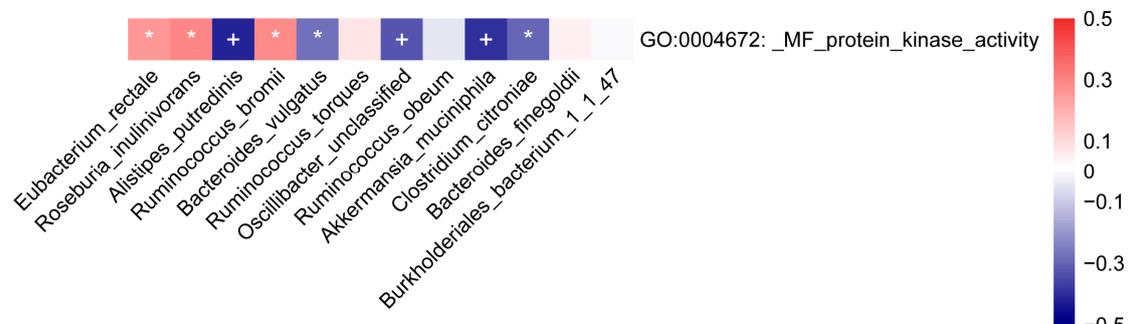


**Figure S3.** Boxplot of different function modules in three groups.



**Figure S4.** Heatmap of Spearman correlation between different species and clinical indices between three groups. Positive correlations are indicated in red text and negative correlations are indicated in blue text. (\*  $p < 0.05$ ; +  $p < 0.01$ )

HDLCH, high density lipoprotein cholesterol; SBP, systolic blood pressure; DBP, diastolic blood pressure; INS, insulin; UA, uric acid; BMI, body mass index; LDLCH, low density lipoprotein cholesterol; GGT, glutamyltransferase; AST, glutamic oxalacetic transaminase; ALT, glutamic pyruvic transaminase.



**Figure S5.** Heatmap of Spearman correlation between different species and function modules between three groups. Positive correlations are indicated in red text and negative correlations are indicated in blue text. (\*  $p < 0.05$ ; +  $p < 0.01$ )