

Supplementary File 4. Microbial subgroup analyses.

Subgroup analyses of microbial abundance before and after GHT in patients with adequate relief (n= 32, Table 1), in patients with IBS-D (n= 22, Table 2), and in patients with psychological distress (n= 25, Table 3).

Table 1. Subgroup analysis of abundance before and after GHT in patients with adequate relief (n=32)

Taxonomy	<i>p</i>	<i>q</i>
Phylum		
<i>Cyanobacteria</i>	0.042	0.815
Family		
Other Bacteroidetes	0.011	0.815
<i>Eubacteriaceae</i>	0.014	0.815
Clostridiales Family XI	0.021	0.815
<i>Lachnospiraceae</i>	0.031	0.815
Uncultured Gastranaerophilales	0.042	0.815
Genus		
<i>Coproccoccus 3</i>	0.004	0.815
Uncultured Lachnospiraceae	0.013	0.815
Other Bacteroidetes	0.015	0.815
<i>Anaerofilum</i>	0.020	0.815
Uncultured Ruminococcaceae 9	0.025	0.815
<i>Coproccoccus 2</i>	0.033	0.815
Uncultured Gastranaerophilales	0.042	0.815
<i>Eubacterium ventriosum group</i>	0.043	0.815
<i>Ruminococcus gauvreauii group</i>	0.043	0.815
Other Lachnospiraceae	0.043	0.815
Uncultured Lachnospiraceae 10	0.050	0.815

Relative abundances of taxa with changes $p < 0.05$ in percent, Median [Q1-Q3]. *q*-values are FDR-corrected *p*-values.

Table 2. Subgroup analysis of abundance before and after GHT in patients with IBS-D (n=22)

Taxonomy	<i>p</i>	<i>q</i>
Family		
Clostridiales Family XI	0.030	1
<i>Veillonellaceae</i>	0.043	1
Genus		
<i>Anaerofilum</i>	0.014	1
<i>Lachnospiraceae UCG10</i>	0.016	1
<i>Ruminococcaceae UCG11</i>	0.022	1
<i>Ruminococcus 2</i>	0.024	1
<i>Other Clostridiaceae</i>	0.046	1

Relative abundances of taxa with changes $p < 0.05$ in percent, Median [Q1-Q3]. *q*-values are FDR-corrected *p*-values.

Table 3. Subgroup analysis of abundance before and after GHT in patients with psychological distress (n= 25).

Taxonomy	<i>p</i>	<i>q</i>
Families		
<i>Veillonellaceae</i>	0.008	0.998
<i>Fusobacteriaceae</i>	0.034	0.998
Genera		
<i>Coproccoccus 3</i>	0.012	0.998
<i>Ruminococcaceae UCG009</i>	0.014	0.998
<i>Lachnospiraceae UCG010</i>	0.021	0.998
<i>Anaerofilum</i>	0.024	0.998
<i>Coproccoccus 2</i>	0.028	0.998

Relative abundances of taxa with changes $p < 0.05$ in percent, Median [Q1-Q3]. *q*-values are FDR-corrected *p*-values.